May 17, 2019

City of St. Louis Treasurer's Office

Parking Management – Software, Meter Maintenance, Collections, and Parking Violations Bureau

Duncan Contact Information

Marc Lucey

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duncan solutions

Professional Account Management, LLC

633 W Wisconsin Ave. Suite 1600

Milwaukee, WI 53203

City of St. Louis
Treasurer's Office
1200 Market Street, Room 220
St. Louis, MO 63103

RFP: Parking Management – Software, Meter Maintenance, Collections, and Parking Violations Bureau

TECHNICAL PROPOSAL

This response is presented by
Professional Account Management, LLC
a wholly owned and controlled subsidiary of Duncan Solutions, Inc.
For simplicity, we routinely refer to our company as
"PAM" or "Duncan"

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May 17, 2019

Carl Phillips
City of St. Louis
Treasurer's Office
1200 Market Street, Room 220
St. Louis, MO 63103

SUBJECT: Response to RFP for Parking Management – Software, Meter Maintenance, Collections, and Parking Violations Bureau

Dear Mr. Phillips and Members of the Selection Committee,

Professional Account Management, LLC, a Duncan Solutions company (Duncan), respectfully submits this proposal to supply key system components for the City of St. Louis's (the City's) parking management RFP. This document details our proposed solution, including how it will benefit STLTO and its stakeholders and facilitate outcomes that match the City's objectives.

Duncan has over 30 years' experience helping government agencies deliver parking citation management programs for cities of all sizes. **We manage approximately 750,000 citations annually for the City of Milwaukee alone, and provide citation management services to some of the leading cities in the United States, including Atlanta, New Orleans, Detroit, San Diego, Pittsburgh, Sacramento, and more.**

In order to provide an all-encompassing solution for the City, Duncan has partnered with several other leaders in the industry, creating the Duncan Team. The Team, focused on delivering comprehensive parking and mobility management solutions, was assembled with the understanding that the City is looking for more than a group of vendors and is instead interested in forging a goal-congruent partnership. As such, the Duncan Team is comprised of several proven partners, each providing the City with innovative, segment-leading solutions, while operating as a cohesive, integrated unit.

Duncan offers not only an innovative, modern solution, but also a record of performance excellence. Our processing and collections system and techniques are consistently being refined to better assist our clients' needs. We plan to be an extension of STLTO while also generating the maximum amount of revenue. With our main goal to improve our clients parking program and maximizing collection revenues earlier in the debt flow lifecycle, we are mindful of the importance of every interaction with the public. We find each interaction is an opportunity to gather information, build trust, and support customers in their efforts to comply with STLTO policy.

Based on our understanding of the City's requirements, our program will provide STLTO with a comprehensive parking citation issuance, processing, and collections system. Our system is designed to optimize customer service, improve program compliance, and maximize program collection rates through the use of the latest parking enforcement and customer self-service technology. We believe a core benefit of this system stems from the integration of its component parts into a related whole, with our AutoPROCESS™ database at its center. This configuration allows system components, as well as system users, to easily interact and access necessary data. We built AutoPROCESS on modern relational database structures and run it on windows-based servers, making it a true Windows application. The application is fully hosted by Duncan, so STLTO can benefit from over 99% uptime and high system responsiveness.

The primary contact person for clarification purposes on behalf of Duncan is:

Marc Lucey
VP, Parking & Mobility Solutions
Phone: 414-248-0472
Email: mlucey@duncansolutions.com

We are committed to partnering with STLTO to implement a low-risk, innovative, and industry-leading solution that will deliver on the City's parking management application, business intelligence platform, and customer support services just as we have for decades with municipalities across the country. If successful, we will bring the Duncan Team's extensive experience, knowledge, and capability to the City, refining and improving STLTO's parking management solution.

As the Chief Executive Officer of Professional Account Management, LLC, I am authorized to make representations and legally bind the company to any subsequent agreement for this opportunity. Duncan looks forward to the opportunity to work with STLTO to implement our innovative parking management software and all additional services.

Sincerely,

Tim Wendler
Chief Executive Officer
Professional Account Management, LLC
Phone: 414-847-3758 | Fax: 414-847-6790
Email: twendler@duncansolutions.com

EXECUTIVE SUMMARY

For more than 30 years, Duncan has provided citation issuance solutions, citation management solutions, and delinquent collection services to a large number of government agencies and has demonstrated strength through a nationwide presence.

We are pleased to submit our proposal in response to the City of St. Louis Treasurer Office (STLTO) RFP for Parking Management – Software, Meter Maintenance, Collections, and Parking Violations Bureau. We believe our solution is best fit to provide STLTO with the seamless, customer-friendly, and cost-effective system it desires.

HIGHLIGHTS

- Duncan is distinguished by **over 30 years of vehicle-related violation processing experience**
- **Duncan is offering an all-in-one solution** that combines our cutting-edge technology with industry best practices and outstanding service
- **The Duncan Team comprises several industry-leading companies** with centuries of combined experience to enhance the City's overall management and agency efficiency.
- We provide robust permit management, processing **hundreds of thousands of permits**
- Our seasoned team provides **innovative and high-performance citation processing solutions**

As a Nationwide operator of large-scale parking programs, Duncan understands the formidable challenge facing STLTO, an agency whose mission requires managing both parking and enforcement operations, while staying ahead of increasing customer demand. In this environment, nothing stands still for very long, and we must constantly evolve to deliver upon stakeholder and motorist expectations. We understand STLTO wishes to have a comprehensive and interlinked system that is comprised of a turnkey parking management solution. Not only is Duncan capable of providing and installing a complete parking management system, we are able to provide one that is capable of all of STLTO's proposal requirements and elements.

To accomplish STLTO's objectives, we have provided an overview of the reasons STLTO should choose to partner with Duncan and have showcased how our system is the most efficient, customer-friendly, and cost-effective option for STLTO.

Duncan brings several experience-based capabilities that distinguish our proposed solution:

- Duncan and its affiliates serve nearly 200 municipal clients with industry-leading parking processing and/or collections services including Milwaukee, WI; San Diego, CA; New Orleans, LA; Detroit, MI; Pittsburgh, PA, and many more. Our systems and solutions have been developed and continually refined to meet the specific needs of local government and nuances of a dynamic parking management program.

- We offer the most advanced parking citation management system in the industry, known as **AutoPROCESS™** – Duncan's user-friendly citation processing system, which leverages our proven technology framework and business rules from the 30+ year history of our system.

This base of experience provides the unique combination of familiarity, proven capability, and balanced perspective to offer low-risk, high-reward service delivery to STLTO. Duncan continuously develops and enhances its parking citation processing and collection services.

DUNCAN SOLUTIONS OVERVIEW

Today, Duncan services approximately 5.5 million accounts annually, with a combined value of over $540 million, and in 2018, Duncan garnered revenues in excess of $60 million through contracts and operations.

Professional Account Management, LLC was formed in 1999, and is a wholly owned subsidiary of Duncan. We are a registered collection agency and premier provider of delinquent collection services. In 2008, Duncan further broadened its capabilities when it acquired Law Enforcement Systems, LLC, which possessed unique capabilities for facilitating DMV data acquisition for transportation and tolling agency clients across North America.

In August 2017, Duncan was acquired by Navient Corporation (Navient). Navient is a leading provider of asset management and business processing solutions for education, healthcare, and government clients at the federal, state, and local levels. Navient is a Fortune 1000 company and helps its clients and millions of Americans achieve financial success through its services and support. The advantages of being a part of a large organization cannot be understated. Additional research and development funding are available to evolve and grow our suite of service offerings for our clients. And unlike venture capital firms, Duncan does not have investors who are looking to liquidate any positions in the near-future.

Navient's resources combined with Duncan's expertise

Under Navient's ownership structure, the City will benefit from the focused expertise Duncan has built its reputation, while still enjoying all the benefits of operating with the resources and infrastructure of a Fortune 1000 company.

With the financial backing of Navient, a growing and stable Fortune 1000 firm, Duncan is able to enhance its core capabilities with additional resources, tools, and expertise for its collection strategies, call center management tools and compliance, and complaint management processes. Many of these functions are key components of Navient's loan servicing business, so they are easily applied to enhance Duncan's solution in support of STLTO. One hundred percent of Duncan's parking management work is government related. Through our years of experience, we are keenly aware of the sensitivities involved in providing quality services to government staff and the public constituents.

Key features of our solution include:

Proprietary system – AutoPROCESS™

- Single, seamless system meeting all functionality required by STLTO
- Evolved over 30 years and spanning the entire United States of America
- Core technology supporting industry best practices

Proven revenue generation

- Demonstrated track record of superior revenue generation performance
- Proprietary, highly efficient processes to identify customer contact details
- Waterfall approach to prioritize the least costly and most effective resources
- Domain-specific parking and vehicle-focused solution, outperforming competitors' generic solutions

Unmatched DMV lookup capabilities

- DMV registration information, managing authorizations, business rules, data processing and compliance for all 51 DMVs
- Manages complex interfaces, business rules, policies and administrative requirements
- Experts who have developed strong knowledge and relationships with DMVs

Customer account portal

- A customer-friendly website where customers can establish an online account to view citations, request a review and/or dispute, view citation status, view violation images and due dates, make payments, and view payment history all in one place
- Recently redesigned payment website optimized to enable customers to easily make payments on their mobile devices

Integrations, integrations, integrations

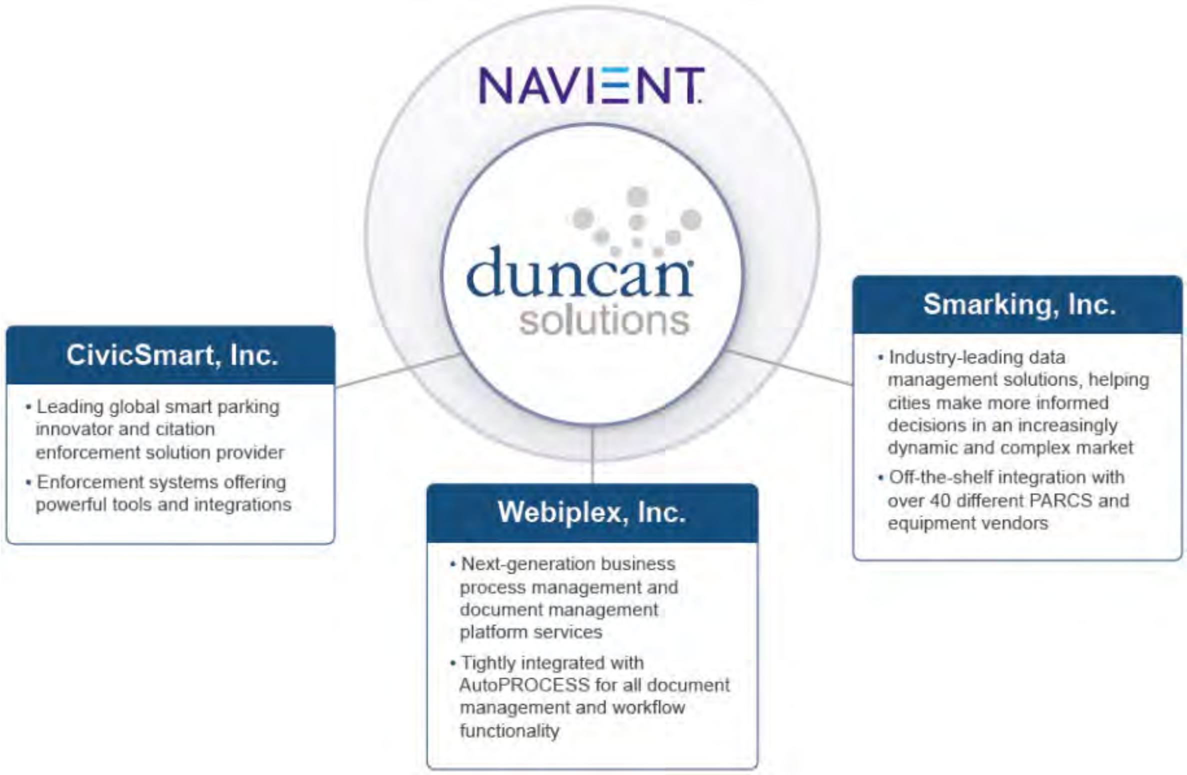
- Through our years within the parking industry, we have developed partnerships with countless vendors to ensure complete system integration capabilities
- Our vendor list includes, but is not limited to: **ParkMobile**, Pay by Phone, **Parkeon**, Paylock, New World Systems, Pango, **CivicSmart**, Tyler Technologies, Park Now, Genetec, Manatron, Metric, ACE Software, Gtechna, Lawson, Passport, HUB, TIBA, Sanef, iNovah, and ELSAG

Industry accreditations, compliance standards, and best practices

- **PCI Level I Compliance** – Displays our commitment to data and system security for all of our clients and their customers.
- **ACA International** – Ethical practices coupled with regulatory and legal compliances are core to Duncan's business practices. As such, we take pride in being a member of good standing with ACA International.
- **SSAE 16 SOC** – Since 2012 Duncan has been SSAE 16 SOC I certified.
- **FDCPA** – We train and test our collectors on the Fair Debt Collection Practices Act to ensure optimal collections performance and exceptional customer service.
- **AAMVA** – We support our clients in the provision of safety and wellbeing for their communities and roadways by being members of the American Association of Motor Vehicle Administrations.
- **BBB** – Duncan has earned an A+ rating from the Better Business Bureau, displaying our constant commitment to providing outstanding customer relationships.
- **Interpreting** – Duncan's IVR system speaks English and Spanish and our Call Center is staffed with at least two Spanish-speaking representatives. We also offer Language Line, a worldwide leader in interpretive services.

THE DUNCAN TEAM

The Duncan Team is comprised of several proven partners, each with the capability of providing STLTO with innovative, segment-leading solutions.



Subcontractor Overview: CivicSmart

Duncan continues to partner with CivicSmart, a true pioneer in handheld enforcement solutions with over 30 years' experience.

CivicSmart's "smart city" solutions include smart parking meters, citation enforcement software and handheld citation issuance devices, vehicle detection sensors, and comprehensive data management systems. In 2015, CivicSmart, Inc. acquired Duncan Parking Technologies, Inc., which has provided 82 years of innovative parking equipment, services, and systems to municipalities around the world.

CivicSmart's fundamental business is to provide parking equipment and systems that help municipalities get the highest return from their investment. CivicSmart has been a leading provider of parking enforcement solutions for over 30 years, and more than 250 clients use CivicSmart's enforcement products today, including many large clients such as Detroit, San Diego, Atlanta, and Miami-Dade County. When CivicSmart first entered the automated citation issuance marketplace, it was with the introduction of the AutoCITE™ handheld enforcement device in 1986. CivicSmart issued the first electronic parking citation in California and has been a leader in innovation ever since. With the largest handheld enforcement client base in the industry, CivicSmart has benefited from a "best practices" laboratory to continually refine its enforcement platform.

CivicSmart offers a comprehensive solution for citation issuance and enforcement through its hosted AutoISSUE citation issuance system. Designed for use in the parking industry and perfected over decades and many cycles of development, CivicSmart's AutoISSUE software has evolved to meet the challenges of hundreds of citation issuance operations around the world while keeping pace with evolving technologies.

Subcontractor Overview: Smarking

To provide an industry-leading business intelligence platform, Duncan partners with Smarking, the parking industry's first and leading exclusive provider of parking business intelligence solutions and business intelligence technology.

Since its MIT-based roots in 2013, cofounders Wen Sang and Maokai Lin—at the time PhD students and active members of the Martin Trust Center for MIT Entrepreneurship—sought to replicate the success and efficiencies that business intelligence and inventory digitization had created in the airline and hotel industries. Beginning with its first client, Logan International Airport, and still today, no other firm has successfully implemented as many parking business intelligence solutions as Smarking. With more than five years of experience in building parking-centric business intelligence solutions and just under 100 satisfied clients in over 2,000 locations in the USA and Canada, Smarking has quickly emerged as the industry's premier analytics provider.

Subcontractor Overview: Webiplex

A trusted Duncan partner, Webiplex provides a web-based business process Software as a Service (SaaS) product named "DocuPeak"™, which is used for the content capture and imaged-based correspondence workflow application. Duncan staff has extensive experience with DocuPeak. The application has been integrated with AutoPROCESS to add valuable workflow tools and it has been used to provide a web portal for client support. Webiplex is located in Newport Beach, CA. They will provide technical support for the DocuPeak application platform and all other image-based applications in the future.

OUR SOLUTION BENEFITS

While our proposal provides detailed information regarding all aspects of our solution, we believe there are three key benefits that prove Duncan is the best choice for STLTO.

Benefit #1 | Best-value solution

Duncan is proposing a competitive and responsible price for the parking management software and enforcement technology. Duncan has endeavored to present our fees for the required services in a clear and concise manner, and while other vendors may propose a lower fee, Duncan developed our cost proposal based on what **we believe are in the best interests of STLTO and the City of**

St. Louis's long-term investment. We are proposing a robust, "best fit" solution that will optimize STLTO's parking citation collection and closure rates, meaning more revenue for STLTO. We welcome the opportunity to meet with the STLTO to discuss the proposed solution and price.

Benefit #2 Depth of Experience

There is no substitute for experience. **Duncan offers the most seasoned, capable, knowledgeable, and committed team of project personnel available in the industry.** Together, the focused project team brings hundreds of years of parking program management expertise that simply cannot be matched by recent start-ups or newcomers to the industry that "moonlight" in on-street parking program management. As evidenced by the Duncan Team's experience with agencies such as the Pittsburgh Parking Authority, and the years of service several of our team members, our breadth of knowledge in implementing the proposed services are vast.

Benefit #3 Turn-key solution

At Duncan, our goal is to be more than just another vendor for STLTO; we plan on being a true partner, one that understands STLTO's mission to contribute to the economic vitality of the City of St. Louis. Unlike other vendors, Duncan provides STLTO with a true vendor-hosted parking citation management system, our turnkey solution. Quite simply, Duncan can provide **all the services that are outlined throughout the RFP, including any optional services.** In fact, not only can we provide the optional services, but these services are standard for us. To the extent Duncan is selected, no processes or procedures need to be invented.

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1. SCOPE OF SERVICES

The scope of STLTO's parking management program requires a contractor with demonstrated core competencies in all aspects of citation processing, issuance and management systems, services, and operations. Duncan provides a wide variety of parking management services and will offer its expertise to best guide STLTO's program and the implementation of new features through our offer of increased functionality, exceptional service, and state-of-the-art equipment.

With our aggregate 30 years of experience processing parking citations and our portfolio of clients processing more than 5 million citations annually, Duncan continues to meet and exceed the minimum requirements and the corporate core competencies requirements by a wide margin. We believe that this base of experience, along with our vast knowledge of Missouri-specific laws and regulations, provides us with the unique combination of close familiarity, proven capability, and balanced perspective to offer low-risk service delivery with a fresh approach to longstanding program challenges.

1.1 PARKING MANAGEMENT SOFTWARE

At the core of our solution for STLTO is our vendor-hosted AutoPROCESS application. **AutoPROCESS is a proven, integrated, and flexible parking management and collection system that meets or exceeds all of the City's requirements.** The system has been continually developed, enhanced, and reengineered over its 30-year history. This experience has molded our solution into a mature, time-tested, project-proven application that relies heavily on the application of technological advances, best practices, and lessons learned from current and previous deployments. We maintain and support the system for the life of the contract (installing version upgrades as they become available), perform required data backups, provide for disaster recovery, offer trained/certified staff to monitor the daily activity of the system, and troubleshoot and correct any system-related problems.

A brief overview of the core components of our AutoPROCESS™ system follows:

Violation Import: The success of the program begins with system input. If initial entry is incorrect, then every phase will be adversely affected.

AutoPROCESS contains a seamless process that enables automated batch importation of electronic citations and related data from handhelds, such as the importation of photos, voice files, and citation images. Wireless capabilities enable real-time upload of citation data, validation of scofflaw enforcement lists for improved enforcement management, and customer service management. A schedule, determined by the City, will be configured for wireless or automated batch transfers.

Payment processing: Comprehensive, convenient, easy-to-use payment options, and outstanding service combine to create a positive, lasting customer impression.

Duncan provides a variety of convenient and secure payment options to the customer and utilizes a high volume, accurate processing technology. We work with the City to customize payment services options that will meet their specialized needs and the needs of the client's customers. We provide all hardware, software, and support services for all payment processing options.

DMV data management: Correct registered owner (RO) information is essential to citation life cycle and collection of revenue.

Duncan provides DMV registered owner name and address services for all 50 states, the District of Columbia, Canadian provinces, and apportioned vehicles in Mexico (when/where allowed by law). Duncan's comprehensive DMV RO process uses a combination of Nlets, direct DMV access, and other DMV data, combining for an unrivaled, expansive reach.

Noticing: Notice generation and mailing need to be cost effective, highly scalable, and flexible to meet a variety of noticing specifications.

AutoPROCESS uses automated system routines to determine if citations are eligible for the generation and mailing of notices. These automated processes are based on rules, formats, and content defined and approved by you. Our solution identifies and processes special bulk correspondence runs such as partially paid citations, NSF transactions, drive-away letters, administrative review/hearing letters, permit renewal notifications, and other conditions as agreed upon.

Collections: Government agencies have important budgetary goals, and revenue from delinquent accounts can be an important alternative to raising taxes or issuing bonds.

Our proven collection methodology is designed to deliver maximum collections and ensure a positive public perception. We expertly obtain and use registered owner data to generate smarter collections campaigns, all in strict conformance with regulations such as the Fair Debt Collection Practices Act (FDCPA), the Telephone Consumer Protection Act (TCPA), and the Fair Credit Reporting Act (FCRA).

Sanctions: The use of sanctions and their quick removal when payments are made is essential to the customer's overall viewpoint of your program.

The AutoPROCESS boot and tow module facilitates the dispatching, monitoring, management, and reporting of boot and tow programs as they may apply to a given municipality. The system enables event-driven capture of information directly into the AutoPROCESS database, including integration with payment functionality that creates and relieves fees associated with the boot and tow operation.

Adjudication: The public's perception of your overall citation management operation is, in part, attributable to the ease of use, fairness, and efficiency of the hearing process.

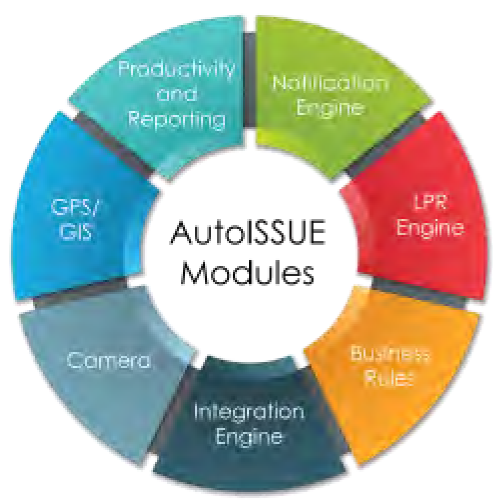
Duncan provides online citation administrative review and administrative hearing request solutions for our clients. Because adjudication rules and processes vary by agency, our administrative review, hearings, and scheduling module was designed to be extremely flexible. It can easily be modified to support individual client requirements. Annually, our solution manages over 100,000 hearings.

A. On-Street Meter Enforcement

Duncan has partnered with CivicSmart, a true pioneer in handheld enforcement solutions with over 30 years' experience.

When CivicSmart first entered the automated citation issuance marketplace, it was with the introduction of the AutoCITE™ handheld enforcement device in 1986. With that introduction, CivicSmart issued the first electronic parking citation in California and has been a leader in innovation ever since. With the largest handheld enforcement client base in the industry including cities like Detroit, San Diego, Miami-Dade, New Orleans and Atlanta, CivicSmart has benefited from a "best practices" laboratory to continually refine its enforcement platform.

CivicSmart offers a comprehensive solution for citation issuance and enforcement through its hosted AutoISSUE citation issuance system. Designed for use in the parking industry and perfected over decades and many cycles of development, CivicSmart's AutoISSUE software has evolved to meet the challenges of hundreds of citation issuance operations around the world while keeping pace with evolving technologies.



AutoISSUE combines proven functionality with a mobile-based platform to offer seamless integrations, operational efficiency, and reduced costs while improving customer service, revenues, and policy outcomes.

The benefits of the CivicSmart solution include:

- **Accuracy** – All of the City's business rules, data fields, and logic are pre-loaded into the software to prevent common errors. The enhanced LPR system will scan and enter license plate information within seconds.

- **Productivity** – AutoISSUE's map-based interface increases officer awareness and productivity, and GPS tracking provides unprecedented information for supervisory staff. A messaging platform allows for automated and manual alerts to officers and supervisors about relevant field activities and conditions.
- **Integration** – AutoISSUE is used by hundreds of parking operations, integrating with a variety of citation processing systems, parking meters, pay-by-phone systems, sensor solutions, and more.
- **Innovative platform** – AutoISSUE is constantly being innovated and updated to best serve, and integrate with, an ever-evolving smart parking industry.

The AutoISSUE Enforcement System is the leading citation issuance software in the country. Citations issued from AutoISSUE can be immediately imported into Duncan's citation management system via wireless communications.

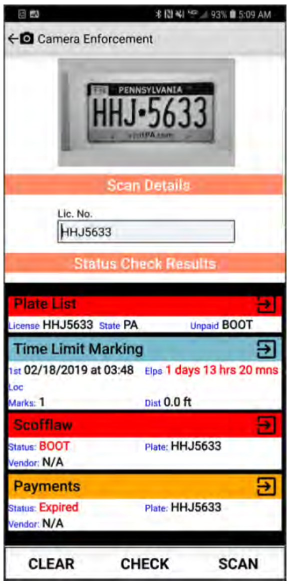
Enforcement officers access the AutoISSUE software from a variety of one- or two-piece devices running the Android operating system.

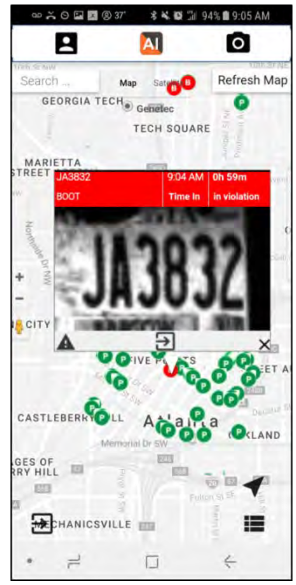
AutoISSUE is integrated with almost all of the meter and mobile payment providers in the market (including Parkeon and ParkMobile) so Parking Enforcement Officers (PEOs) can see real-time payment status on their handheld map. A "last-second" check is also performed against all payment systems to ensure a payment wasn't made while the PEO was completing the citation. Officers can review a facsimile of the citation and make edits prior to printing the citation. Photos and audio notes are captured from within the application and sent to the processing system.

AutoISSUE includes a License Plate

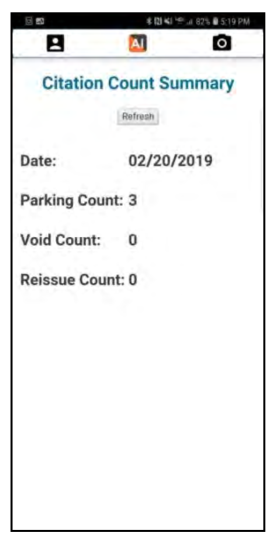
Recognition engine that reads and automatically chalks and checks the plate against any payment, permit, scofflaw or stolen vehicle file (below left). Electronic chalks are shared across all handheld devices so once a PEO performs an initial chalk, that data is available to all other PEOs.

The system also integrates chalks from Mobile LPR systems manufactured by Genetec and Vigilant Solutions and images of the plates are visible to the officers on their handheld.

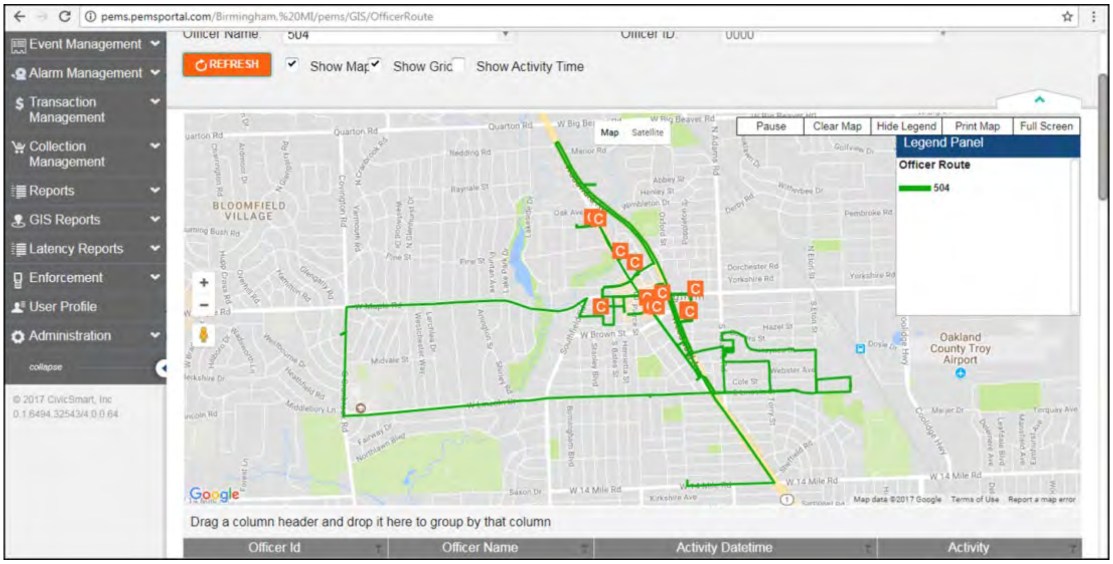




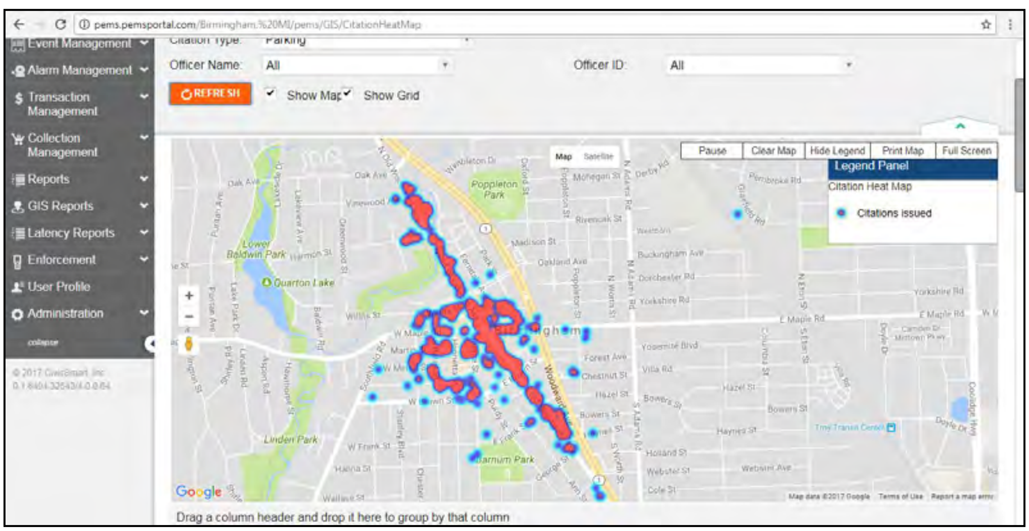
In order to support hundreds of enforcement clients, our system is completely configurable. The layout, as well as any edit checks and business rules, is agreed with the City as part of customization and implementation. To promote program performance and officer productivity, officers can report broken meters, damaged signs, and log their activity from within the application. Individual officers can see the route they have taken and their issuance counts while in the field to promote accountability.



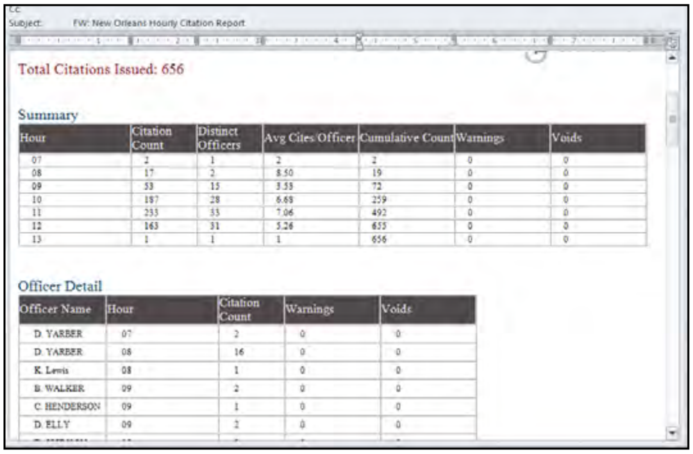
The Parking Enterprise Management System (PEMS) tracks officer activity using GPS and supports complete activity, transaction, and financial reporting for our handhelds. PEMS can export data in a variety of formats including CSV, XLS, XML, RTF, Word, etc.



Heat maps of citation issuance and officer activities are available in PEMS.



Emails of issuance are sent to enforcement supervisors every hour to provide immediate insights into field activities rather than waiting until the next day to learn about issues. CivicSmart can also geo-fence officer beats and send email and text alerts to supervisors and officers if they leave their assigned area.


Cc:
Subject: FW: New Orleans Hourly Citation Report

Total Citations Issued: 656

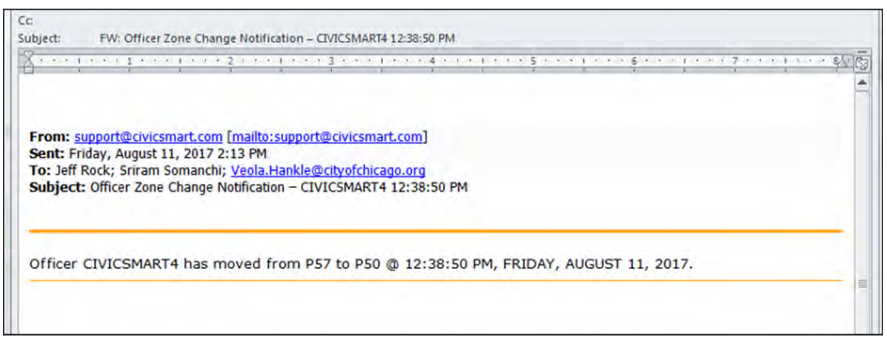
Summary

Hour	Citation Count	Distinct Officers	Avg Cites/Officer	Cumulative Count	Warnings	Voids
07	2	1	2	2	0	0
08	17	2	8.50	19	0	0
09	53	15	3.53	72	0	0
10	187	28	6.68	259	0	0
11	233	33	7.06	492	0	0
12	163	31	5.26	655	0	0
13	1	1	1	656	0	0

Officer Detail

Officer Name	Hour	Citation Count	Warnings	Voids
D. YARBER	07	2	0	0
D. YARBER	08	16	0	0
K. Lewis	08	1	0	0
B. WALKER	09	2	0	0
C. HENDERSON	09	1	0	0
D. ELLY	09	2	0	0

CivicSmart can also geo-fence officer beats and send email and text alerts to supervisors and officers if they leave their assigned area.


Cc:
Subject: FW: Officer Zone Change Notification – CIVICSMART4 12:38:50 PM

From: support@civicsmart.com [mailto:support@civicsmart.com]
Sent: Friday, August 11, 2017 2:13 PM
To: Jeff Rock; Sriram Somanchi; Veola.Hankle@cityofchicago.org
Subject: Officer Zone Change Notification – CIVICSMART4 12:38:50 PM

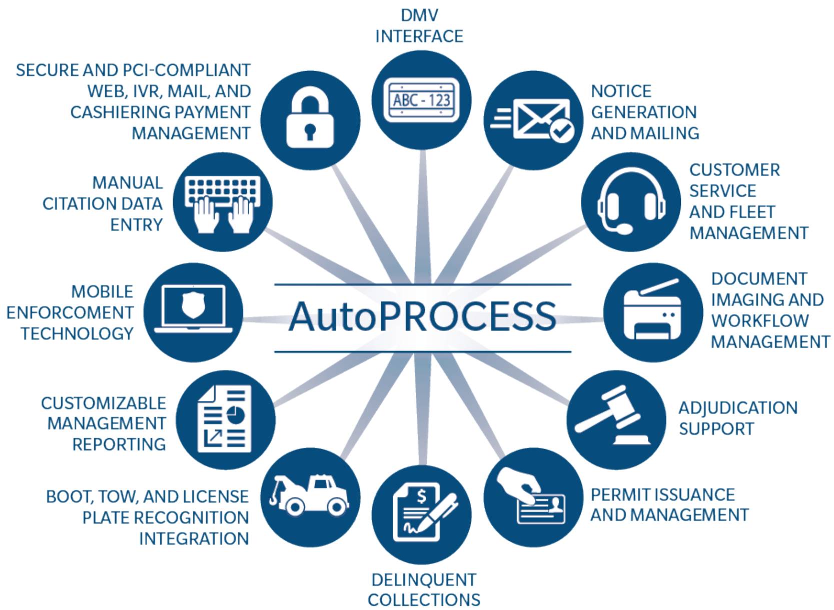
Officer CIVICSMART4 has moved from P57 to P50 @ 12:38:50 PM, FRIDAY, AUGUST 11, 2017.

B. Citation Management/PVB

The core of Duncan's citation processing and revenue management solution is its AutoPROCESS application.

AutoPROCESS is a Windows-based, menu-driven violation processing system designed specifically for processing parking, traffic, and municipal ordinance citations. The AutoPROCESS solution is augmented by a suite of back-office services to provide comprehensive citation management. A core benefit to this system stems from the integration of component parts (modules) into a related whole. This configuration allows system components and users to easily interact and access necessary data without the implementation of complex or unsecured third-party interface mechanisms. AutoPROCESS is built on modern relational database structures and runs on windows-based servers as a true Windows application.

AutoPROCESS: a true all-in-one solution



AutoPROCESS's modular design provides a feature rich, user-friendly system.

AutoPROCESS is fully hosted by Duncan, so **STLTO can benefit from over 99% uptime** and high system responsiveness, without needing to invest in the infrastructure that would be required for a self-hosted solution. Secure access through the internet is granted to authorized City users, throughout the life of the contract. Benefits of our AutoPROCESS solution include:

- **Proven Scalability:** AutoPROCESS is the chosen solution regardless of the size, scope, or level of sophistication of a program. Currently, we have clients with annual volumes ranging from 5,000 to 750,000 citations.
- **End-to-End Citation Management:** Our solution is the most comprehensive in our industry. It manages the full lifecycle of the citation, from issuance to resolution. While the competition may bring pieces to the table, we offer a turn-key program.
- **An Integrated Solution:** As the parking industry's only true end-to-end systems integrator, our solution is designed with seamless interfaces connecting all major solution modules, including iNovah, Flowbird/Parkeon Paystations, and Passport Labs Inc.
- **Unmatched DMV Capabilities:** We have access to all 51 state DMV agencies and we obtain registered owner information via a multiple-step, multiple-source methodology that yields optimal hit rates.
- **A Flexible, Robust Reporting Mechanism:** In contrast to most of our competitors, AutoPROCESS offers a great deal of reporting agility, with a large repository of standard reports, true ad-hoc report generation functionality, and dashboard features. In addition, our team of analysts can provide report creation and analysis support.

Duncan's hosted solution encompasses all aspects of citation processing, from issuance through submission, to secondary collections. Throughout all phases of the processing lifecycle, Duncan offers efficiencies in data management and provides for improved data integrity by implementing all data management in an Oracle database platform. Duncan employs a proven system and process for data transfer with the requisite controls and audit trail in place to ensure that every citation issued is accounted for and transferred in a timely manner. Controls are generated for all transfer functions and maintained for audit and traceability purposes. At any time, if there are changes in policy or equipment, Duncan will facilitate any changes required to help ensure successful ongoing operation.

IMPORT

AutoPROCESS enables automated batch imports of electronic citations and related data from handheld enforcement devices.

Duncan will configure and implement an automated schedule (predetermined by the City) for wireless, batch transfers from the City's electronic enforcement devices into the AutoPROCESS system. This includes the importation of photos, voice files, and citation images from the handheld devices.

REAL-TIME TRANSFER

Electronic citations can be automatically entered in AutoPROCESS through real-time data transfer. With real-time transfer, after a citation is printed, photos and related files are instantly uploaded into AutoPROCESS. Wireless handheld capabilities also allow real-time validation of scofflaw enforcement lists for improved enforcement management. Real-time citation upload gives customers instant visibility to their citation information and enables them to immediately pay their citation using our mobile-friendly payment website.

GENERATING AND TRACKING NOTICES

Duncan sends approximately 10 million notices annually on behalf of our clients. To streamline the generation of outbound notices and correspondence, AutoPROCESS utilizes automated system routines that run daily to determine if citations are eligible for the generation and mailing of notices. The notice processing routines run automatically and will be based on your approved rules, formats, and content. In addition to standard notice generation, our solution also identifies and processes special bulk correspondence runs such as partially paid citations, NSF transactions, drive away letters, review and hearing decisions, hearing notifications, general correspondence, permit renewal notifications, payment plan default letters, and other conditions as agreed upon.

Any changes in the type, format, content, or scheduling of the current notice/correspondence generation will require your review and approval prior to use. Additionally, Duncan will work closely with the City to help identify and manage any special noticing or correspondence runs during the course of our agreement. Our noticing generation and services process includes the following:

- Providing all forms, envelopes, notices, and pre-addressed, bar-coded return envelopes
- Storing any required forms and envelopes

- Printing citation information on notices and correspondence
- Stuffing and mailing notices and automatically generated correspondence
- Handling initial postage concerns
- Including a stub on the notice for the violator's record
- Including an optical character recognition (OCR) line on the notice which can be read and recognized automatically by remittance processing equipment in the lockbox facility
- Imaging of all notices and generated correspondence as well as attachment to their respective system record (account, citation, permit, etc.)

Audit Trail

Duncan's AutoPROCESS system records full audit trails of all actions taken within the system (payments, dispositions, date edits, correspondence, notices, etc.). The system captures the date/time stamp, user, and terminal ID for every transaction as well as the details of the transaction. The details captured include the value of each data element before the transaction and the value after the transaction. A full record of actions taken on a particular citation, including the audit trail information, can be viewed online by authorized users and printed as required.

ONLINE INQUIRY

AutoPROCESS allows authorized users to access and maintain information in real time including citation data, registered owner data, hearing data, permit data, boot/tow data, notice data, correspondence data, public contact data, payment history, processing status and the like. The system is based on a graphical user interface (GUI) design that supports all system functions including screens, menus, data retrieval, reports and configuration management.

Authorized City users have the ability to inquire on individual citations by numerous criteria, including state/plate, citation number, name, violator's license number, VIN, etc. Searches for records can also be initiated using partial data such as the first or last characters of a last name or a partial license plate number. Citation records can be grouped by user-selected options for online display by various categories such as all citations for a given license plate, all citations for a specific responsible party, etc.

Inquiry Overview

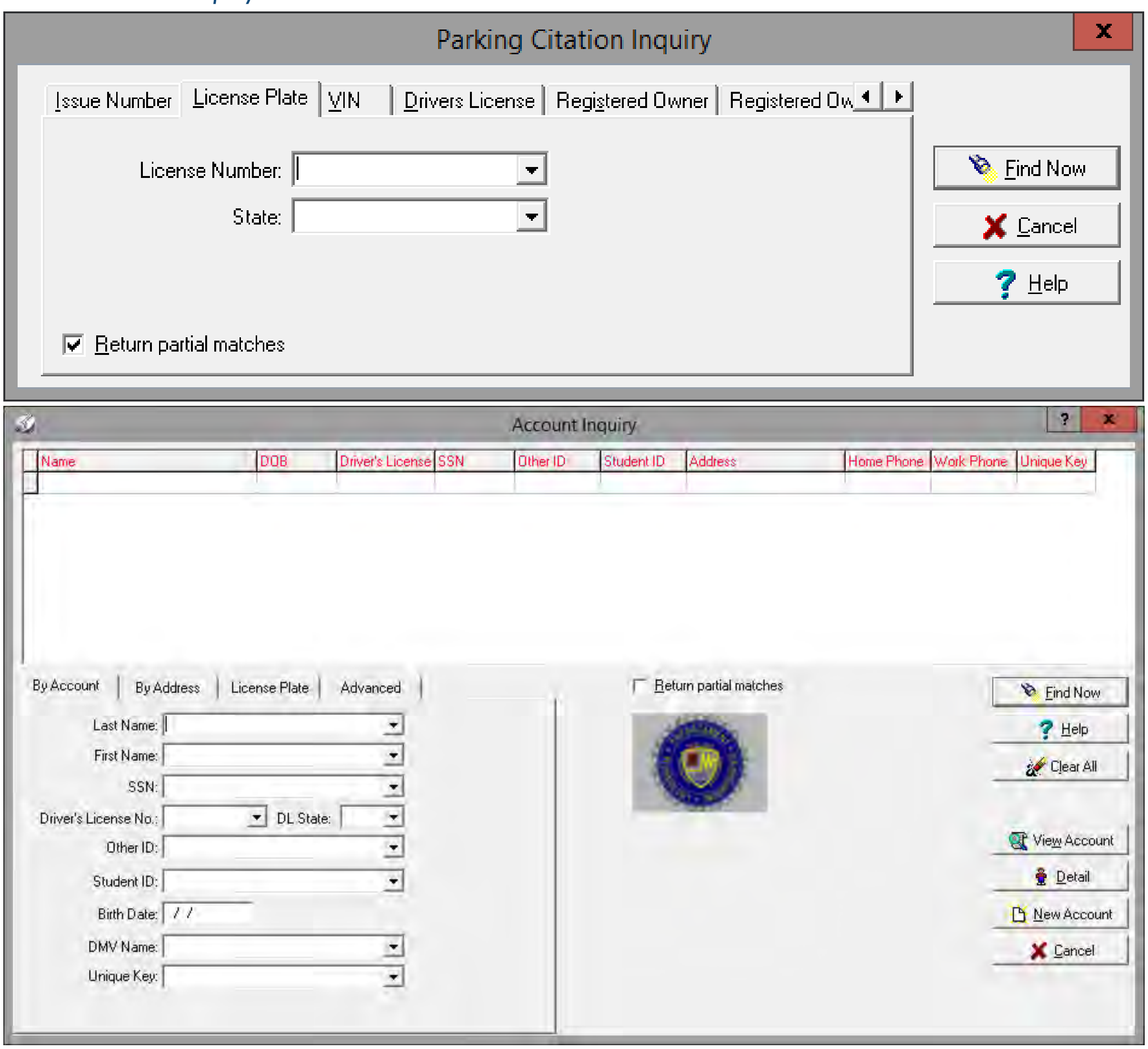
AutoPROCESS is an account-based citation processing system that allows users to search on citations using the citation or the patron account as the primary relationship key. Each method is described below.

AutoPROCESS users have the ability to inquire on individual citations by numerous criteria, including state/plate, citation number, name, driver's license number, VIN, etc. Additionally, other distinct data fields can be indexed and used as an access criterion at the City's request. Searches for records can also be initiated using partial data such as the first or last characters of a last name or a partial license plate number. Citation records can be grouped by user-selected options for online display by various categories such as all citations for a given license plate, all citations for a specific responsible party, etc.

The AutoPROCESS citation or patron inquiry functionality incorporates all search parameters and data elements identified in RFP such as:

- Citation history/detail
- Date, location, time of violation
- License plate history/detail
- Payments(s) detail, amount(s), date(s)
- Notice(s) detail
- DMV Plate/make detail
- Citations boot/tow eligible
- Marked citations
- Vehicle color/make
- Hearing schedules
- Disposition detail

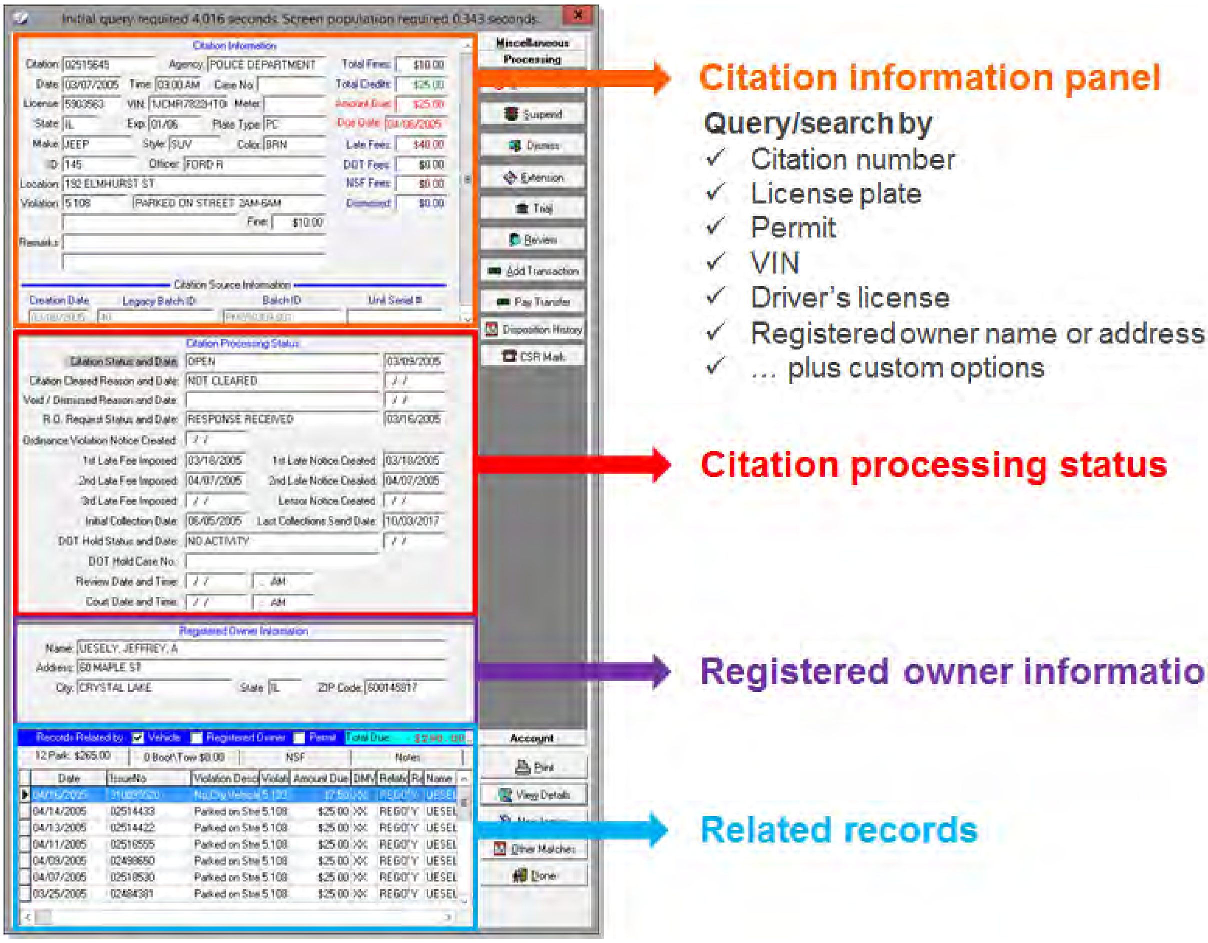
Citation & Account Inquiry



AutoPROCESS allows users to easily search the database for citations using a variety of search parameters.

The main "Citation Inquiry Results" screen displays information from the face of the original citation, the status of the citation, DMV information, the current balance and all fines, fees, penalties and credits, noticing history, court hearing and non-judicial review history, delinquent collection referral information, etc. Similarly, the main "Account Inquiry Results" screen displays information on all data records related to the requested account.

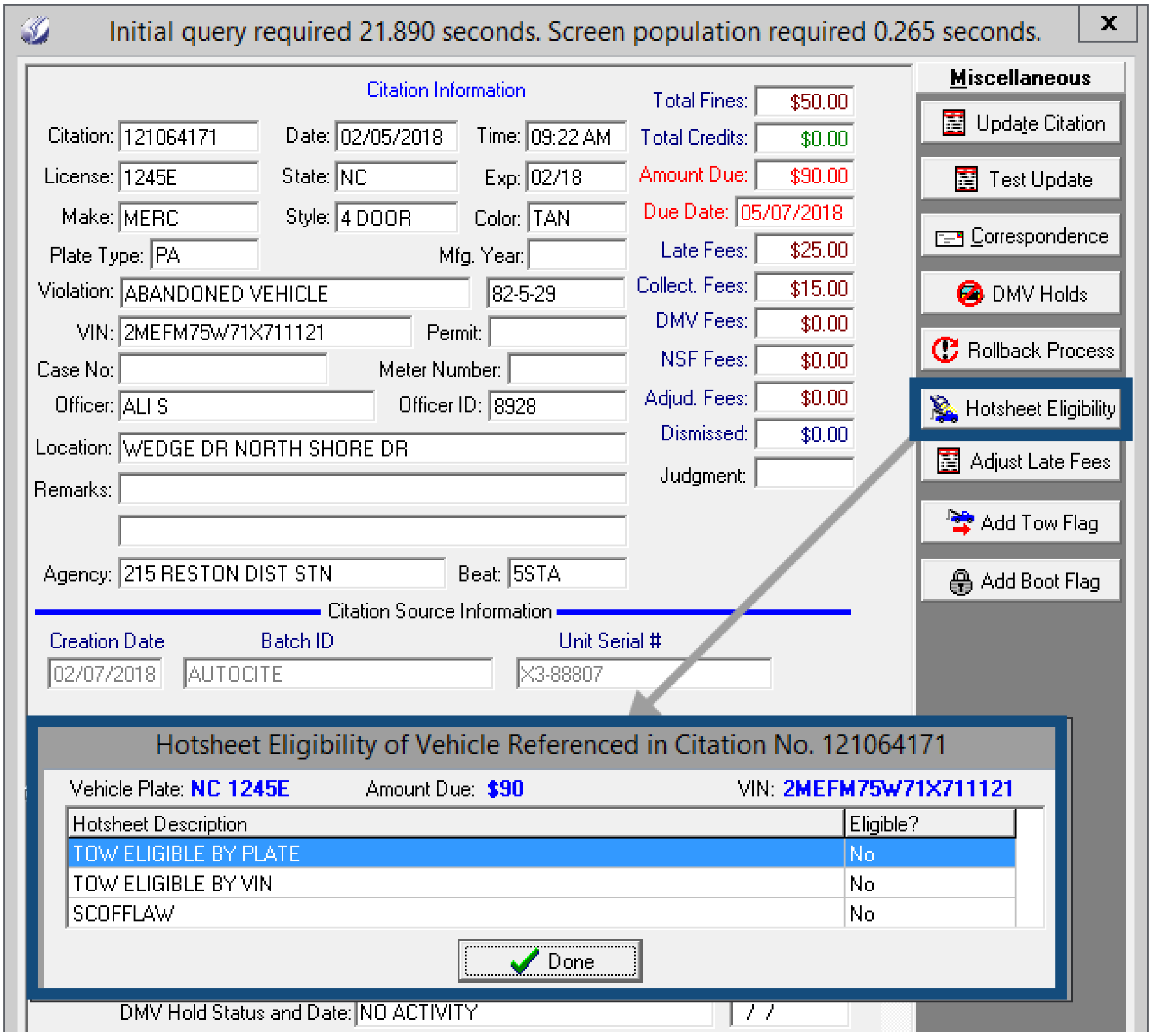
Parking Citation Inquiry Results Screen



The citation results view displays all detail information related to a specific citation and also provides easy access to the associated system account and any related data.

In addition to providing access to basic citation information, a violation can be queried for boot or tow eligibility. The screen sample provided below depicts the selection option as well as the resulting feedback screen.

Boot Tow Eligibility



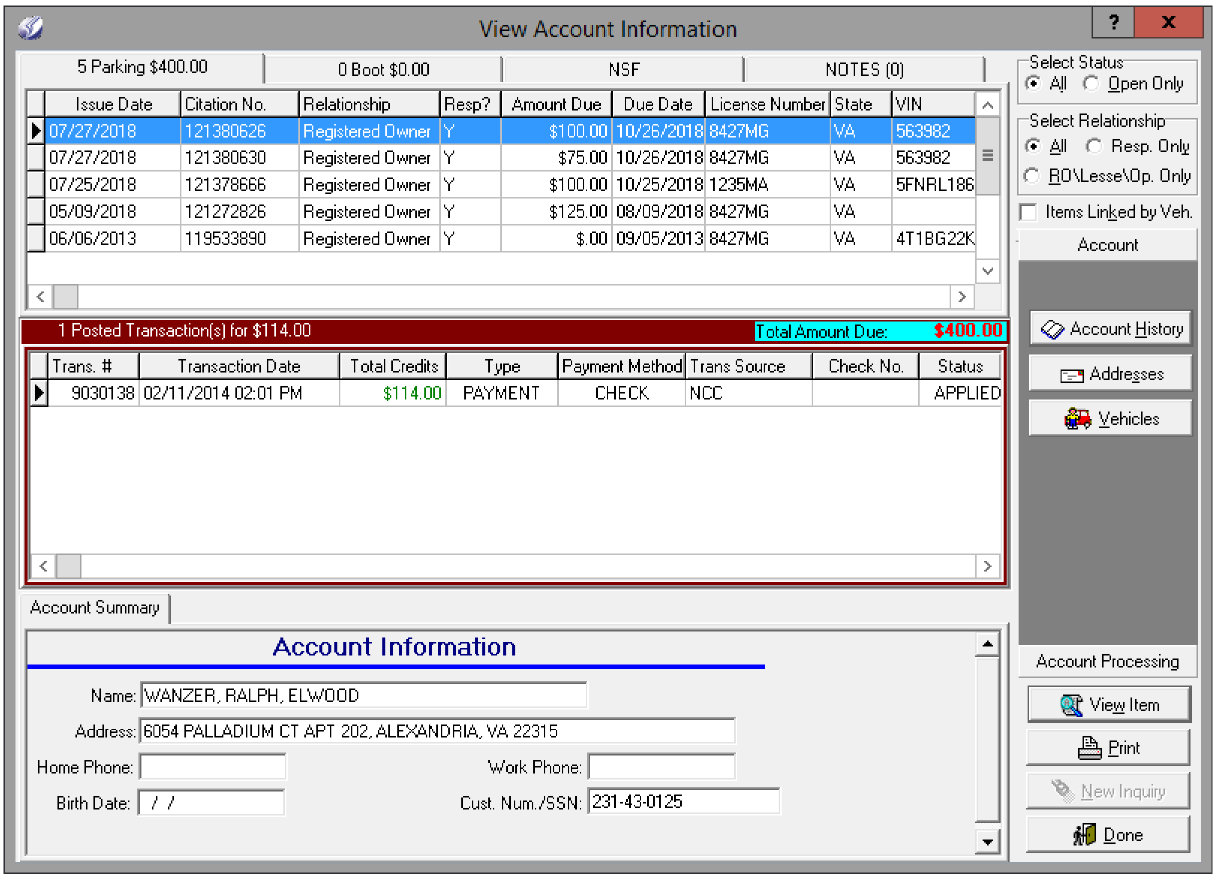
The citation results view displays all detail information related to a specific ticket and also provides easy access to the associated system account and any related data. The 'Records Related by' filters allow the user to further filter the display based on data relationships.

Violator Database

Authorized users have the ability to make an account inquiry using criteria such as responsible party name (Owner Name) or address, company name, etc. Searches may also be initiated using partial data such as the first or last characters of a name, and a user may also access an account directly from any individual data record related to that account.

AutoPROCESS' design enables it to take maintain information both at the account level (e.g. all citations for an individual or entity) or at a specific citation. The account record contains the data elements of name and address as well as a number of other elements as shown in the graphic below.

Account/Violator Data



Violator information is stored as the AutoPROCESS account record.

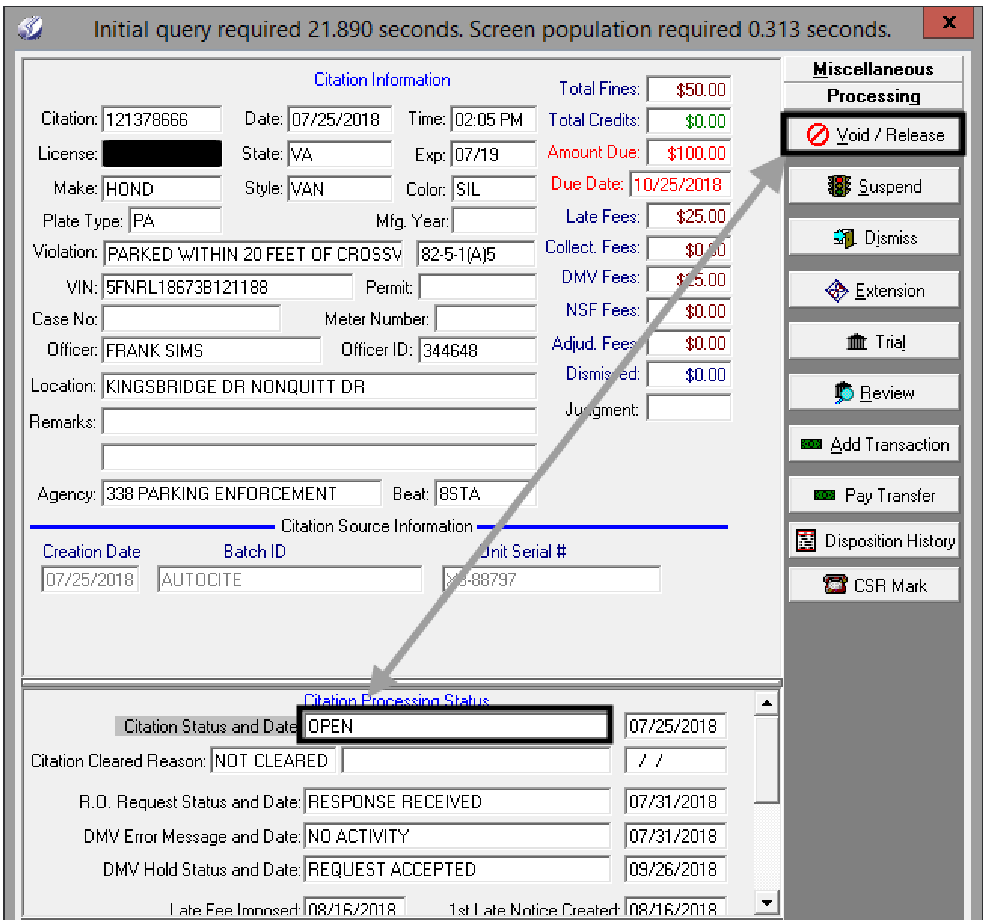
These account or violator records can be created manually in AutoPROCESS, but generally are created automatically as a by-product of the creation of data record or account-relevant information being entered for an existing data record (examples of this includes the entry of a parking citation and the addition of registered owner information).

The account-based nature of AutoPROCESS allows authorized users to rapidly and accurately identify all citations for a specific patron and ascertain the total amount owed by the patron. The account structure and screen layouts make it easy for authorized users to research customer service inquires and seamlessly moves from record to record within an account reviewing data at a high level or drilling down to the smallest detail. The account structure is also the basic building block for our optional Fleet Citation Management and Lease/Rental Citation Management modules.

Online Updating

AutoPROCESS provides for real-time information updating including account information, payment information, notations and the like. Citation status is affected by such activities as voiding, dismissals, action suspensions, and due date extensions. The screen below shows an example of a citation record being updated manually.

Real-Time Citation Detail Update



Citation records can be updated in a wide variety of ways, including those listed below.

- **Void/Reinstated** – Provides the ability to close a violation that was written in error or was not valid on its face. When a violation is voided, any assessed fines and/or fees are credited in full so that if a payment has been received, a credit balance is created. Once a void has been processed, the status of the violation appears in the online inquiry screen as closed and the reason and date of the closure is also displayed. In the event a violation was voided in error, it can be reinstated.
- **Dismiss/Reverse Dismiss** – Provides the ability to close a valid violation short of full payment for a valid administrative reason. When a violation is dismissed, any currently unpaid fines and/or

fees are credited so that if a payment has been received, a credit balance is not created. Dismissals are frequently used to close violations where the original fine has been paid and an administrative decision has been made not to pursue any outstanding late fees. Once a dismissal has been processed, the status of the violation shows on the online inquiry screen as closed and the reason and date of the closure is also displayed. In the event a violation was dismissed in error, it can be reversed.

- **Suspend/Resume** – Provides the ability to temporarily suspend all action on a violation including assessment of late fees, generation of late notices and other automated system actions. Once the sequence of events that initiated a suspension change, the violation processing events can be resumed.
- **Extend** – Provides the ability to alter the due date for all actions on a violation including assessment of late fees, generation of late notices, and other automated system actions.

These capabilities are controlled by the individual user's security profile. An authorized user has the ability to void or dismiss an open violation and must select the reason for the void or dismissal from a predetermined list of valid reasons. Standard system reports are available showing both detail and summary information related to the closing of violations. Furthermore, all status updates are recorded in the AutoPROCESS system audit trail.

CITATION APPEALS AND ADJUDICATION

Inherent in the citation processing lifecycle, a portion of violators will wish to contest citations issued by the City. To administrate this process, Duncan provides a variety of appeal submission methods for customers, including online, mail, telephone, and over-the counter. Because adjudication rules and processes vary by agency, our Administrative Review, Hearings, and Scheduling module was designed to be extremely flexible. It can easily be modified to support individual client requirements. On an annual basis, our solution manages over 100,000 hearings.

We are at the forefront of technology in the area of review and adjudication services support that we provide to our clients. We have continually enhanced our AutoPROCESS product to provide easy to use software and related services that take advantage of new trends and technologies and are specifically tailored to each client's individual review processes. Some of our new innovations include paperless request and response services, integrated workflow management for both mail and public web requests. Some of the features that we will provide are:

- Online web requests and workflow management for administrative reviews
- All support required to handle incoming administrative review and hearing requests
- Integrated software to support the indexing of the scanned contestation document images to the appropriate citations
- Integration of all mail-in administrative review and hearing requests and correspondence into a workflow management solution
- Integration of a customer facing website enabling customers to view the status of their contested citations

- Comprehensive daily, weekly, monthly and on-demand reporting to support the administrative review and hearing process
- Duncan provides a number of convenient options for contesting and requesting an administrative review for issued citations.

Online Requests
Duncan provides the option to request Administrative Reviews online. We will work with the City to configure the review request form to accommodate applicable business rules that can be updated by the City as needed. Once a request for Administrative Review is made, the citations will be suspended from processing and the system will populate the AutoPROCESS record with data provided by the requestor.

Our convenient customer facing website solution provides the ability for a customer to identify their citation(s), review photos, and elect to pay online, or select the administrative review process. If a review is requested, AutoPROCESS automatically verifies the citation eligibility for review according to the City's business rules. If eligible, the system will prompt the user to enter any required information for the review request including the option to upload supporting documents that would be applicable for the review process.

Mail & Over-the-counter Requests
Duncan's latest addition to its comprehensive dispute process was designed to conveniently process citations disputed through the mail or over-the-counter. The new menu allows, clerical staff to quickly enter dispute materials, including the reason for request and supporting documents, similar to the online submission method. Once entered, the case is added to the review queue, exactly line citations disputed online. This workflow allows clerical staff to easily process customer's over-the-counter requests to dispute citations, while providing all necessarily materials for the reviewer to easily make an outcome decision when processing the requests.

Administrative Review Management
The AutoPROCESS Administrative Review module is used to record initial requests, as well as capture information and actions taken the initial request to final response and disposition according to the City's business processes. Duncan will provide the City with the following capabilities and related services for the Administrative Review process:

- Uploading scanned images, indexing and attaching request to database records
- Loading requests to workflow queues, tracking and managing actions
- Entering data including such items as citation number, vehicle plate, received method, reason for review, etc.
- Printing and mailing of the Administrative Review notices by the City
- Printing and mailing Administrative Review notices through our noticing vendor (optional)
- Coordinating reporting requirements

The user records a decision to deny or accept the request. If the request is denied, the system will generate a relevant letter, which can be printed in real-time or mailed through a batch process to the noticing vendor.

Authorized users can enter or view Administrative Review notes at any step in the process. All notes are listed in chronological order and can be viewed by anyone who has Inquiry privileges. Users can also select and print decision letters from the correspondence screen. Different letter templates are used depending on the decision and the number of citations involved. All letter content is subject to approval by the City.

Administrative Hearing Management

The Hearings module provides the ability to capture data from administrative hearings, create a hearing calendar, schedule hearings for individuals, produce a hearing docket, record hearing outcomes and provide a variety of reporting. During the administrative hearing process, citations are automatically suspended from further action by the system.

AutoPROCESS has been programmed to support the California Level 2 appeals process. Duncan follows a similar workflow process for hearings as it does for administrative reviews, and would use the City's guidelines for Level 2 Appeals.

Using the AutoPROCESS hearing function, our process will include the following:

- The hearing request function will not allow a hearing request if eligibility requirements have not been fulfilled
- Uploading scanned images, indexing and attaching request to database records
- Loading requests to workflow queues, tracking and managing actions
- Entering data including such items as citation number, vehicle plate, received method, reason for review, etc.
- AutoPROCESS will schedule hearings for the City assigned hearing officer(s), using the integrated Court Scheduler (optional)
- City assigned Hearing Officer(s) can record hearing activity data directly into AutoPROCESS and the workflow or they can forward data to the City for entry
- Printing and mailing of the Administrative Hearing notices by the City
- Printing and mailing Administrative Hearing notices through our noticing vendor (optional)
- Coordinating reporting requirements

The system performs the first step in a Level 2 Hearing, by placing a hold on further processing in AutoPROCESS, and schedules the hearing. The hearing officer or the City then receives the Level 2 Hearing information for processing and City renders a decision in AutoPROCESS. Then an appropriate correspondence letter explaining the outcome of the Level 2 Hearings will be sent to the requestor. All relevant AutoPROCESS data such as disposition codes and correspondence will be presented to the City and the Hearing Officer for review and approval prior to implementation.

Administrative Hearing requests are supported by AutoPROCESS just like the Administrative Review process. Users will be notified on the first screen of the Administrative Hearing program if the Hearing request date has exceeded the City's requirement of number of days. The Hearing Request can then be denied or an exception can be made.

Hearing dispositions can be entered real-time on-line into the citation processing system. The system is normally configured so that the user must select a valid disposition reason code from a pre-determined list of disposition reason codes. The on-line entry screen allows the authorized user to uphold the issued citation, dismiss the citation, modify the violation fine, modify any assessed late fees, and/or assess adjudications fees or court costs. The user also has the option to set a new due date to give the violator time to pay the violation before subsequent collection events resume.

When the disposition is entered, the system will recalculate the total due and produce a document for the citizen showing the hearing disposition and the new amount due or generate a required notice. The system provides the flexibility to define and accept the type of dispositions and statuses, including:

- Liable
- Suspended
- Dismissed
- Bail forfeiture
- Dishonored payment
- Fine adjustment
- Penalty adjustment

Payments & Dispositions

AutoPROCESS gives authorized City users the ability for City staff to make adjustment transactions including waived amounts, voided citations, dismissed citations, late fee "roll back", returned checks and refunds. This includes reversing, modifying, and adjusting payment amounts to close or reopen a citation, as applicable.

AutoPROCESS allows authorized users to extend due dates, including the "rolling back" of late fees. The system will process the citation under the revised due date and amount, while retaining a record of the original due date and amounts.

COLLECTIONS

Duncan is a leading provider of delinquent debt collection services in the United States, with more than 200 clients benefiting from Duncan's focus on innovation, customer service, and revenue optimization. Dating back to 1982, Duncan has specialized in recovering debts for government entities, and our track record reflects our commitment to innovation, service, and collection performance. Our record of performance clearly shows we can deliver on the unique demands of vehicle-based debts and maximize collections.

Duncan employs a proven collection methodology designed to deliver maximum collections while ensuring a positive public perception. We expertly obtain and use registered owner data to generate smarter collection's campaigns, all in strict compliance with regulations such as the Fair Debt Collection

Practices Act (FDCPA), the Telephone Consumer Protection Act (TCPA), and the Fair Credit Reporting Act (FCRA).

As a full-service collection agency that specializes in public sector parking debts, Duncan stands apart from our competition. Some competitors are commercial collection agencies that "moonlight" on government contracts, and lack the subject matter expertise of a parking industry mainstay. Others are parking specialists that collect parking citations, but do so primarily using rudimentary tools (notices) and simplistic strategies. Most agencies perform little or no account analysis or debt segmentation unless required by a client. Moreover, many employ vanilla, one-size-fits-all collection solutions which are easy to implement and inexpensive to operate, but which deliver underwhelming revenue recovery performance.

Duncan, by contrast, brings a fully realized, nuanced, and opportunistic collection solution that routinely outperforms our competition, as described previously. ***How are we able to deliver these results, time and time again?*** We call it AutoCOLLECT, and it is our best-in-breed municipal violation collection solution. AutoCOLLECT integrates leading tools, innovative strategies, and the most experienced professionals in our industry.

Our collection approach is unique because of our attention to detail. Many agencies take an overly deliberate, notice-heavy approach to assigned accounts, and apply this approach universally to various debt types or ages. We believe that in order to effectively manage municipal parking collections, we must invest considerable resources and tools strategically throughout the parking citation lifecycle, from account assignment to resolution of the debt.

Duncan's solution for the STLTO is comprised of the leading tools and resources in the industry.

Collections Approach

Duncan optimizes collections by actively collecting on all accounts early in the life cycle with our universal front-end process and flow, then using our analytics tools to differentiate groups of accounts and applying custom strategies.

As an experienced collection agency focused on license plate based debt, Duncan understands the needs and requirements detailed in your request for proposal. Our goal is to resolve the Parking Department's delinquent parking citation accounts rapidly and successfully, to transform bad debt into a positive cash flow and optimize your receivables. The flow chart below depicts our high-level collection strategy, which we'll explain in more detail in this section.

Duncan's Collection Strategy Flow Chart

Data analytics is a key component of our collection strategy for an intelligent approach to drive results.

We briefly describe each of the major stages of Duncan's collection strategy below.

Stage 1: Placement

Duncan has the ability to accept data in nearly any format and from nearly any accounting system, whether by web service, secure FTP, VPN, email, electronic media, or paper. Our approach recognizes that many clients and agencies face constraints regarding technology or legacy systems that may be an impediment to meeting rigid file format requirements, so we accommodate virtually all input types to ensure placement processes put as little burden as possible on our clients and their IT departments.

We will interface electronically with the City's IT Department to seamlessly transfer data to and from the STLTO Citation system file every day.

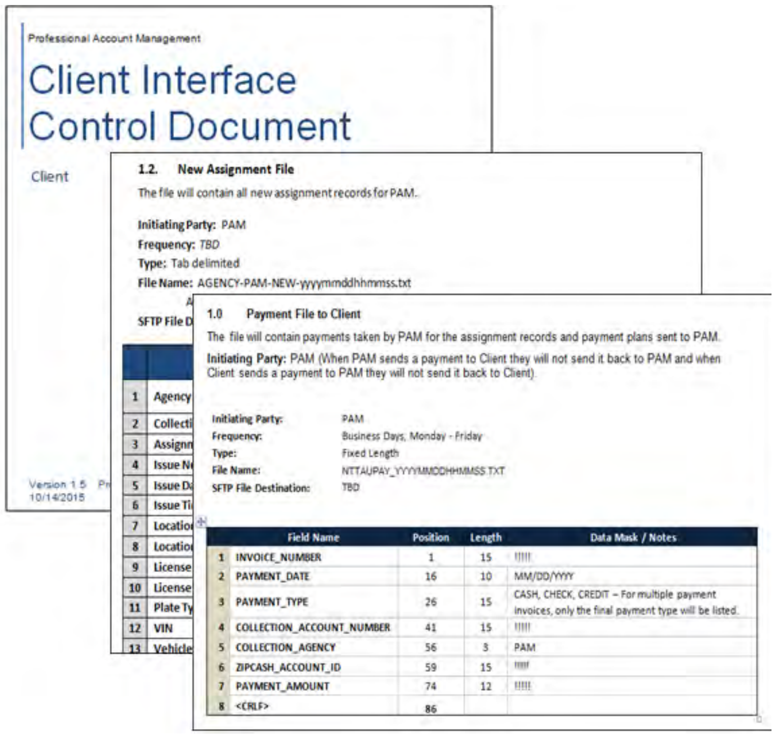
<u>Electronic Records</u>

Duncan accepts debt information from our clients in all electronic formats and in varying layouts and mapping schemes. Our programming group can create custom file loading routines for each agency based on the format, layout and content of the data. Even in cases where all of the daily activity comes to us in one file (new business, updates, payments, adjustments, and closures), our configuration staff creates front end processing routines to segregate each data type which move through separate workflows file prior to loading.

The groundwork for a seamless data transmission channel is laid during implementation. During this period, our IT experts work with your own technical representatives to discuss items such as:

- File layout
- Data mapping
- Test files
- Encryption and secure file transmission

Sample Interface Control Document (ICD)



Custom Interface Control Documents will be developed for each agency.

Through collaboration with the various agencies' IT staffs, we review every aspect of the file exchange process and record the detail in an Interface Control Document (ICD) which defines all of the business rules of each file for each agency, including:

- File type
- Field mapping
- Field codes and related actions
- Naming convention
- Delivery schedule
- Encryption protocol
- Error protocol
- Control totals
- File reconciliation

<u>Non-Electronic Records</u>

A number of our clients provide new account information in hard copy format, which Duncan staff manually data enters to a follow up queue for further processing. The data entry process, much like the file exchange process is memorialized in a procedure manual detailing the business rules for each form type. Debts in the new business files and those that are manually entered are then run through a series of scrub routines to perform address element correction, name formatting, field entry corrections and consumer/commercial segregation. It is only after these final formatting routines are complete that the accounts are loaded to FACS.

Stage 2: Data Analysis

Before a first communication can be generated to initiate the collection process, there are key data analysis activities that must be completed to ensure compliance with relevant laws as well as to maximize the performance of the collection process.

Automated Data Scrubbing

Duncan utilizes an automated scrub process, which flows as follows:

- Verify correct address and phone number
- Seek new address or phone information and append the data with new information
- Apply our proprietary methodology to analyze, format, and map key data fields – especially name and address which can come in different formats depending on state DMV records for any vehicle-based violations

Identification of Bankrupt/Deceased Accounts

Files are updated with new information and proceed with an automated process to identify bankrupt and deceased debtors. Duncan will immediately notify the STLTO in the case where we discover that a debtor is deceased and cease all collection efforts with respect to that particular debtor. Bankruptcies may be closed and returned to the STLTO or may be retained by Duncan and processed according to the STLTO's business rules. We will review the STLTO's handling instructions of such accounts during our implementation planning.

Initial Skip Tracing

For each eligible account, Duncan then completes a first-tier skip tracing routine to generate profile data, which can be used for analysis in defining an optimal collection strategy for each account. Duncan uses the most advanced skip trace tools available and has direct interfaces with over 30 data vendors and information providers including government and law enforcement databases.

While a more elaborate skip tracing process in conducted later in our collection process, the purpose of this initial skip tracing effort is more universally focused. This analysis takes into consideration a variety of factors, including the type and size of the debt, the age of the debt, known facts about the debtor, as well as geographic and demographic factors. While this analysis does not affect the basic approach used for initial collection attempts for any particular assignment, this information is used to build custom contact and collection campaigns which are initiated after the first notice.

Stage 3: Strategy

To ensure the best collection methods and tactics for each account, Duncan builds a customized account analysis profile. Accounts that have been scrubbed and skip traced are then analyzed by a variety of metrics, such as debtor demographic, income information, age of account, prior collection efforts, balance, and a number of other factors. This in-depth analysis is used to generate a specific collection strategy for each account.

Unlike competitors' methods, which utilize account scoring methods as a way to reduce their costs by identifying accounts that they will expend less effort to collect, Duncan's approach is different. Duncan's **customized collections' strategies are in addition to our standard collection methodology,** which ensures that all debts are worked diligently and in a manner that is most likely to lead to a successful collection. We believe this factor is one of the primary reasons we have been able to deliver such a successful liquidation rate over the past 10 years – we never give up on a debtor because of a computer-generated score. Multiple factors and contact patterns are utilized to try and achieve payment for the account pool.

Note that the Strategy stage is one of four stages that recur throughout the debt collection lifecycle as new information is garnered about each account. Together with the Data Analysis stage, the Contact stage, and the Special Tactics stage, Duncan's process recognizes that our system and methodology must be smart enough and flexible enough to recognize that new information can fundamentally alter the collection strategy. Nonetheless, virtually all accounts are coded with a particular strategy and proceed to the Contact stage and the generation of a first notice within one business day of receipt of a placement. When new information is obtained, we continuously evaluate that information, refine our strategy, and modify our contact approach accordingly.

Stage 4: Contact

At this point, updated qualifying accounts are ready to enter the active collection phase. Our initial strategy is followed universally across all agencies and debt types and begins with the mailing of the initial dunning notice. The schedule generates two additional notices to be mailed at day 30 and 60, however the schedule can be modified based on STLTO needs/requirements, strategic timing and notice alternations, and individual debtor circumstances.

Collection Letters

Duncan's noticing approach strategically targets debt segments according to sophisticated analytics defined during the Strategy stage. These tools drive targeted campaigns that produce efficient and effective results from our noticing program. Several types of communications make up the most common and effective written communications to debtors:

- First Notice or Initial Demand letters
- Graduated Notices which are typically second and third letters in a series customized by debt type
- Payment Plan Arrangement letters, which document a payment plan agreed to by a debtor during a phone contact or via correspondence
- Payment Plan Reminder Notices, which serve as a reminder on a periodic basis of an upcoming due date for a payment

Duncan's automated and sophisticated noticing services ensure timely and effective communication with debtors to help improve revenue recovery. Our noticing process covers all required noticing activity including the following:

- Providing all forms, envelopes, notices, and pre-addressed return envelopes
- Storing forms and envelopes
- Processing all files through the USPS NCOA database, including mail forwarding and undeliverable mail updates
- Printing STLTO-specified account information on notices
- Stuffing and mailing notices first class
- Handling all postage concerns
- Including a stub on the notice for the debtor's record
- Including an optical character recognition (OCR) scan line on the notice that can be read and recognized automatically by remittance processing equipment

Immediately after information is verified or updated via skip tracing, a custom designed, multi-colored, and laser printed initial collection notice is sent. The collection notice contains information about the delinquent debt including details and an itemization of the outstanding liabilities. All letters sent to debtors by Duncan are custom designed and laser-printed. All of our letters provide the debtor with a toll free phone number and internet address for obtaining account information and making account payment 24-hours per day, seven days per week. A remittance slip bearing the assigned reference number and a return remittance envelope are also provided with each notice.

Duncan's noticing strategy includes specialized noticing campaigns to various subsets of the collection's population. Each collection notice generated and mailed will vary in the use of text, notice title, and design to always provide a fresh and different look. Each debt type will receive a customized notice designed to communicate key information about the nature of the debt, its origin and affiliation with the referring agency, and the potential consequences of the debt remaining delinquent.

Following the first notice, Duncan initiates other contact methods as well as continued escalating notices to ensure a key message is sent to the debtor: *this debt will not go away by ignoring it – contact us so we can help you address this head-on.*

<u>Telephone Contacts</u>

It is Duncan's experience that a significant number of debtors respond to telephone contact versus written notices. For this reason, dialing campaigns begin in conjunction with the mailing of the first notice.

Our call center group applies a friendly approach to communicating with debtors because, although they are collectors, they are even more so customer service representatives. Most debtors just need assistance with the account resolution process and we work with them courteously and in good faith to meet their obligation to the STLTO as quickly as is possible given each debtor's unique personal situation.

Stage 5: Special Tactics

Duncan leverages a number of specialized tools and methods to ensure that special accounts and special circumstances benefit from special attention.

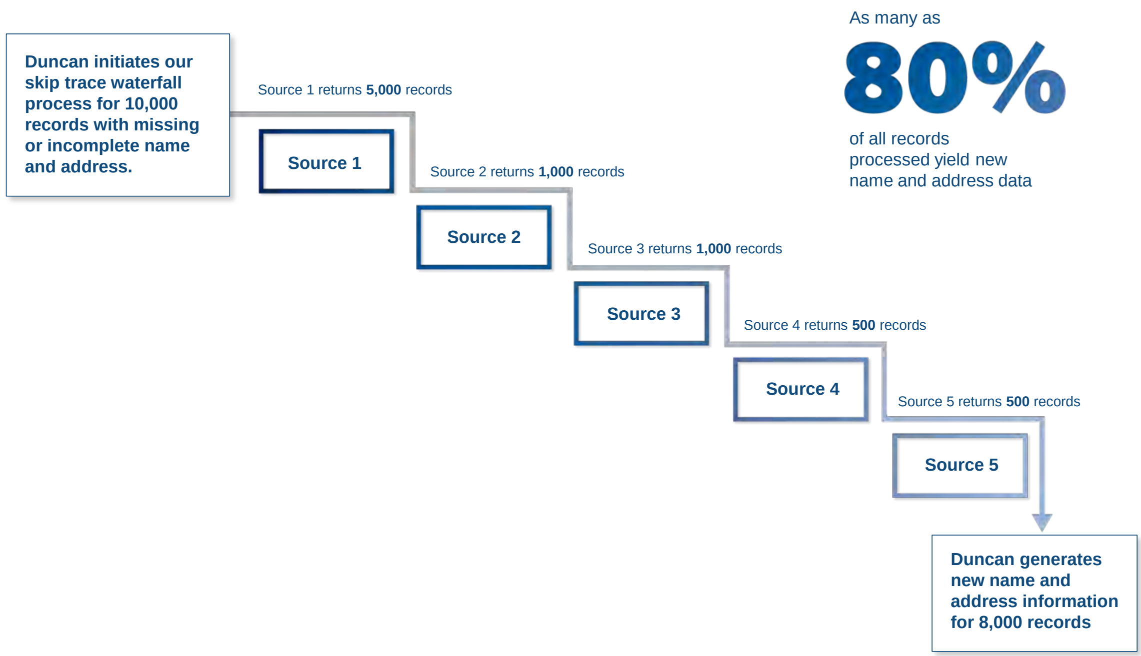
Enhanced Skip Tracing

Duncan uses the most advanced skip trace tools available and has direct interfaces with multiple data vendors and information providers including government and law enforcement databases. All of this information is coalesced into a multi-tiered skip tracing waterfall process that provides information ranging from customer's social security number, birth date, address history, landline, and cell phone numbers, giving us the best chance to contact and collect on delinquent accounts. The multi-tiered skip-tracing process is structured so that the most cost effective and successful tools are initially employed.

Having the most current customer address and phone number data is imperative to having a successful collection program. Duncan's thorough approach for updating addresses and phone numbers is as follows:

- Skip tracing for phone numbers will begin immediately upon assignment to collection
- When a collection letter is returned as undeliverable, skip tracing for an up to date address will begin without delay.
- We use a five-tier database waterfall to find the most up-to-date address and phone number data
- Any no-hit accounts will be submitted through the waterfall on a regularly scheduled basis, to allow for capture of any new personal information presented by an individual

Skip-trace process overview



The multi-tiered skip-tracing process is structured so that the most cost effective and successful tools are initially employed. Having the most current customer address and phone number data is imperative to having a successful collection program.

<u>Enhanced Skip Tracing using our DMV Database Access</u>

For vehicle-based accounts that have been through the waterfall and we haven't been able to receive an updated address, at times we may utilize our various DMV sources to search for a new address for the responsible vehicle owner. Traditionally the DMV data source is only used on the front-end of a citation life cycle. As citations age, there is a chance that owners update their contact information at the DMV, so Duncan may use our access to DMV databases as a back-end skip tracing tool for enhanced collection. This is done for a targeted segment of accounts, where no other source as provided an address updated, and only where permissible via our DMV agreements. We know of no other collection company that has similar comprehensive access to DMV databases, thus Duncan can offer this tool as an advantage to generate additional contact information, which can be converted into revenue for the STLTO.

This component of our service offering is critically important to STLTO as the City has a significant number of citations written to vehicles registered outside the state of Missouri. As soon as these citations issued to Out-of-State registered vehicles are received Duncan will initiate the state segmentation, make/match verification, plate type confirmation and other specified state/plate validations before exporting these transactions to the appropriate state Department of Motor Vehicles for obtaining Registered Owner information.

Duncan is without peer in the acquisition of DMV registered owner (RO) data, which is essential to generating peak revenue from collection activities. Any effort to pursue delinquent debt is contingent upon identifying the debtor. For over 30 years, Duncan has worked with DMVs across the nation to quickly obtain RO name and address information for the operation of municipal collection programs.

We understand the importance of obtaining accurate registered owner information on a timely basis and the impact it has on the ability to optimize revenue recoveries. As such, we continuously fine tune our processes and technical approaches so that we can ensure that our hit rates exceed industry standards. Nationally, our DMV hit rate exceeds 90%. This late cycle DMV activity has the potential to translate into hundreds of thousands of dollars in revenue.

Duncan has demonstrated capabilities through our DMV information acquisition relationships and can obtain RO information from all 50 states, the District of Columbia, and Canadian provinces (where permissible by law). Our proactive relationships with DMVs information sources have enabled our personnel to develop an in-depth knowledge of DMV information access guidelines, rules, and plate configurations for rapid processing and accurate data edits. Once RO data is received, we aggregate all citations for the same license plate owner or VIN and execute account-level collection activities.

Stage 6: Payment

Once contact with a debtor is made, we are often able to negotiate payment or payment arrangements. Our goal is to ensure that there are always convenient ways for motivated debtors to satisfy their debts to STLTO. Accordingly, Duncan offers secure IVR/phone payment options, options to pay by internet and on mobile devices such as smart phones, as well as payments sent via mail using check or money order..

Each payment option is designed to direct payment in real-time to the City's trust account and update Duncan's FACS system to indicate that a debt has been satisfied. This automatically triggers communications to related agencies and can immediately release certain sanctions ranging from a tow release authorization for a seized automobile to an update to a MO DMV registration suspension indicating that a designated debt has been satisfied.

If payment is not secured, we'll work with the debtor and the STLTO to arrive at an acceptable resolution to the debt, usually in the form of a payment plan. In certain special circumstances, the STLTO may opt to cancel or settle a debt or make some other arrangements with the debtor. Duncan will work with Hudson and participating agencies to determine options that best fit the debt.

Stage 7: Close

Duncan will immediately cease collection activity at any point in the collection process if the following should happen:

- If the debtor disputes the debt, we will cease activity and consult with the client to verify the validity of the debt.
- If an account meets a predetermined status set by the STLTO.

- If the STLTO elects to cancel or recall an account for any reason.
- If the account is paid in full

Duncan will declare an account uncollectible if an account meets certain highly specific criteria, or when all efforts to secure payment have been exhausted. We will follow any standards for closure specified by the STLTO, and all status codes can be fully customized to align the STLTO's own accounting and auditing processes.

Duncan will close and return any such account back to the STLTO, along with a full report detailing all collection efforts, any contact made, as well as any updated contact information we may have obtained. During the implementation phase of the contract, Duncan will work with the Parking Department to determine specific criteria they may wish to incorporate into the close and return process.

DMV INTERFACE

Duncan has been the expert in obtaining registered owner (RO) information for parking clients over the past 30 years. In combination with our direct relationships with most state DMV's and other third party RO data sources, we are a strategic partner to the National Law Enforcement Telecommunications System (Nlets). We are able to utilize our multiple partnerships to provide a comprehensive DMV RO acquisition program for all 50 states, the District of Columbia, Canadian provinces, and apportioned vehicles in Mexico (when/where legal).

Nlets Information Access

The National Law Enforcement Telecommunications System, owned by the states, is a 501(c) (3) not-for-profit organization and was created by principal law enforcement agencies of the states over 50 years ago. The user population is composed of all states/territories, every federal agency with a justice component, and selected international agencies, all cooperatively exchanging data. The types of data being exchanged vary from motor vehicle and drivers' data, states' criminal justice hubs, and states' criminal history records. More than 250 million messages are transacted each month.

Duncan's overall hit rate exceeds 91% for MO in-state inquiries

Nlets directly connects to the DMVs. Duncan uses the Nlets interface in combination with direct DMV access and other DMV data sources. As with many DMVs, there can be unexpected Nlets downtime or system-related issues that can prevent access to registered owner data. Nlets' access provides our clients with a primary, secondary, or tertiary method to acquire DMV data. For instance, if there were access difficulties at the MO DMV, we could redirect the requests – originally staged for direct access to the DMV – to go to Nlets, therefore providing uninterrupted service to our clients.

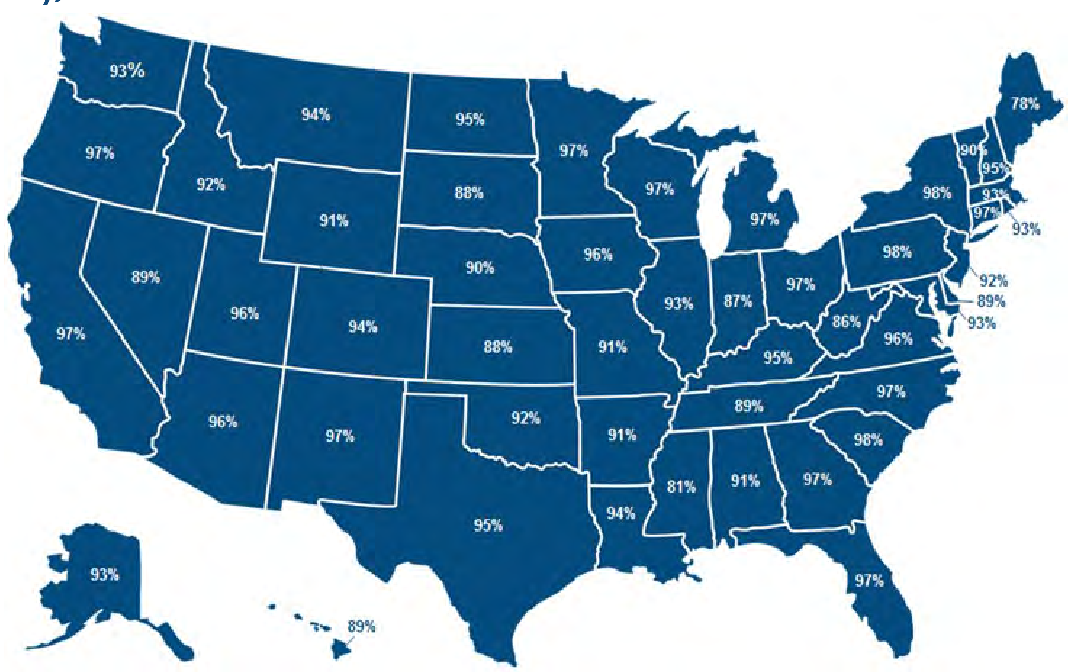
In-State Information

Duncan maintains direct, access to the MO DMV database to support acquisition of registered owner information. With real-time query it also allows you to verify ownership and ensure the appropriate party receives notices for active citations. This interface between AutoPROCESS and the MO DMV is currently extended to over 100 Duncan clients.

Out-of-State Information

We make every effort to ensure out-of-state information is obtained where legal and available. We have found that state DMV regulations change over time and can impact availability of DMV information. To that end, we constantly monitor and advise our clients on those changes, including recommended actions for optimum results. For example, in some cases, sources may require you to obtain approval directly from the DMV. Duncan is well experienced and will assist you as part of our ongoing program management services.

Nationally, Duncan exceeds a 90% hit rate



Duncan is able to maintain high hit rates due to our strategic partnership with Nlets, state DMVs, and multiple third-party sources. For our out-of-state license plates, Duncan requests RO information every 30 days, for a total of three attempts.

PAYMENT PROCESSING

Experience shows that a key factor in reaching and maintaining an acceptable citation payment rate is to provide violators with as many convenient and easy payment options as possible.

Duncan understands the importance of having comprehensive and convenient payment services for a well-run, parking citation management program. We have worked with our existing clients to customize the payment services provided in each of their operations, to meet their specialized requirements and the needs of their customers.

In use since 2003, Duncan's fully-hosted payment website provides user-friendly interfaces for inquiry and payment by credit/debit card or checking account information. Duncan's online and mobile friendly payment site accepts Visa, MasterCard, Discover, and American Express. This payment website is fully and seamlessly integrated with our AutoPROCESS citation management system and is in real-time, allowing users to locate and make payment for a single citation or all citations associated with a specific license plate number.

Duncan provides all required hardware, software, and support services to accommodate all payments, whether by credit card, bankcard, money order, check, or cash. AutoPROCESS can provide payment acceptance and processing capabilities for citations and booted/towed vehicles through the following methods:

Web payment and mobile solution

Duncan's integrated AutoPROCESS web module is used for real-time citation inquiry, credit and debit card payment processing, and is **fully compliant with Payment Card Industry (PCI) data security standards.** Duncan's mobile-friendly device version of our PCI-compliant internet payment site allows users to make citation payments directly from mobile devices.

Point of sale system and cashiering system

AutoPROCESS can be interfaced with your point of sale system for over the counter payment acceptance. This option enables you to utilize your own existing point of sale system to accept citation payments and update AutoPROCESS via batch interface. The AutoPROCESS cashiering software is configured to meet your requirements.

Interactive Voice Response (IVR)

Our IVR system handles calls without a live attendant, using parameters determined by script files and values, in accordance with your needs and requirements. The system communicates in real time with our networked systems through an installed system monitor, updating accounts with information provided by the caller directly into the database without human intervention.

Pay by mail – Lockbox payment processing (if applicable)

Duncan has an established, audited procedure to ensure that every payment is processed and applied to the appropriate account and all money is deposited into client accounts the same day it is received. Each step of our procedure has built in controls to ensure no mail is overlooked and all is processed correctly.

Users can pay citations with credit cards or debit cards securely from the site (as more payment options become available, Duncan strives to include them on our payment website). If the system accepts the payment, it provides an authorization number and allows the user to print the confirmation page for their records. If the customer provides an email address, the confirmation can be sent by email as well. All online payments and adjustments or corrections are processed, applied, recorded, and managed by AutoPROCESS. All electronic funds transfer to City accounts—and the daily reconciliation of the funds transfers are managed by Duncan.

Telephone Payments

Duncan's IVR system currently handles over one million calls annually. **More than 50% of those calls are resolved automatically before requiring CSR intervention, and 95% are answered within 20 seconds.** In addition, our IVR system currently processes over 400,000 payments annually. This IVR functionality, combined with our advanced call center staffing methodology, allows Duncan to successfully handle calls with a 98% completion rate.

Our IVR System handles calls without a live attendant, using parameters determined by script files and values determined in accordance with our clients' needs and requirements. The IVR system communicates in real-time with our networked systems through an installed system monitor, updating accounts with information provided by the caller directly into the database, without the need of human intervention. With this system, callers can request information by either citation number or license plate number for citation status, amount due, and due date.

Interpretive Services

The most frequent non-English calls received are from Spanish speakers, therefore our IVR system is set up with a Spanish option and we have bi-lingual speaking employees available to take calls from citizens during normal business hours. When we identify a non-English speaker, we note that in AutoPROCESS for future reference.

Online Payments

Duncan will provide for credit card, debit card, and check payments to be accepted and processed via our own proven and secure Internet payment engine. Duncan online and mobile friendly payment site accepts Visa, MasterCard, American Express, and Discover and is subject to a per citation convenience fee, which is passed on to the citizen. **Protecting cardholder data is essential; Duncan maintains Level 1 PCI Compliance for the best security.**

Partial Payments

The standard configuration of AutoPROCESS is to accept partial and full payments of fines and penalties; the system will allow a customer to pay a single citation or a subset of citations selected from all open citations for the customer. The system can also be configured to apply partial payments first to the fines and fees due at the City's discretion. Notification of partial payments will be done via the standard notice process.

Payment Plans

The AutoPROCESS Payment Plan module can be used to provide the ability to create installment plans for low-income individuals and accounts with large, outstanding balances in accordance with predefined criteria set by the City. Once a payment plan has been established, tools are available to edit/view the payment plan, to apply payments and to send courtesy and non-compliance notices. Citations attached to a payment plan are suspended and removed from standard citation processing and collections as well as the removal of DMV holds as applicable. Payment plans that are found to be in non-compliance can be revoked manually or automatically by the system and resubmitted for standard citation processing.

C. Booting Program

Sometimes the issuance of citations alone is not quite enough to yield the intended benefits. For example, vehicles that diminish sight distances at intersections or block fire hydrants, alleys and crosswalks still create hazardous conditions even after citing. Therefore, towing and impoundment are required to improve pedestrian and vehicle safety. Additionally, there must be consequences for those who continually flaunt parking regulations, receive citations for doing so, and choose to ignore the financial penalty.

Immobilizing, or booting, vehicles belonging to habitual parking violators is an enforcement tactic that has been used by cities across the United States since the 1970s. The primary objective of this action is to force the owners of these vehicles to settle their outstanding citations. In addition to securing the payment of fines and fees, booted vehicles act as a visible deterrent, encouraging regulatory compliance. Duncan not only supports many of these cities through the capabilities of AutoPROCESS and other complimentary technologies, we are also a practitioner of providing booting operations as one of our contractual responsibilities for the Pittsburgh Parking Authority. Accordingly, we have first-hand knowledge of the impact that a booting program can have in promoting the overall success of STLTO's parking management program.

Since the 1970s, the processes of identifying scofflaw vehicles and applying and releasing the boots themselves have been greatly enhanced through technological advances. The first of these advances was the use of handheld issuance devices as an additional tool for identifying scofflaws. Scofflaw detection became an automated process because the license plates of the vehicles cited by handheld-equipped Parking Enforcement Officers (PEOs) could be automatically checked against a scofflaw list loaded into these devices.

More recently, through the more widespread usage of LPR technology, "boot crews" and other field personnel can more rapidly and accurately reading the license plates of parked vehicles electronically, automatically checking them against a municipality's scofflaw vehicle list. Cities that have implemented LPR technology have found that it can increase dedicated boot crew efficiency by as much as 300 percent.

The AutoPROCESS Boot/Tow Management module is used to address the City's boot, tow and impound requirements through the following features:

- Full integration with the citation database
- Ability to enter booted vehicle information and enter boot release information
- Online inquiries at the citation level searchable by license plate number, registered owner, citation number, and city of residence
- Ability to display booted vehicle status, all boots on-street, and number of days on-street
- Request towing of booted vehicles – PEOs can use their handheld devices to broadcast tow-eligible vehicles to LPR units
- Display inventory of towed vehicles in impound
- Scofflaw eligibility identification through enforcement devices and LPR
- Like parking citations, fees are treated at account level data and easily included in debt calculations, adjudication procedures, payment plans and impound-related noticing

The AutoPROCESS Boot/Tow module configured for the City provides the basic data for identifying vehicles that are eligible for seizure. This is accomplished first by automatic daily preparation by AutoPROCESS of a scofflaw "hot sheet" containing information for every vehicle in the master database meeting defined seizure criteria. Scofflaw lists are built in strict accordance with the City's rules for determining seizure eligibility. Other hot sheets of stolen vehicles, VIP vehicles, Exempt vehicles, etc. can also be created and loaded daily to the handheld device or LPR units. Each type of hot sheet will generate a specific visual warning when a listed license plate is entered allowing the operator to correctly determine the appropriate next step.

Hot sheet eligibility status will be viewable online from the Main Inquiry Results screen in the AutoPROCESS system to enable office staff to determine if a specific vehicle is boot/tow eligible and to ascertain if a recent payment may have changed the boot/tow eligibility status of the vehicle. In addition, a hot sheet report can be printed from AutoPROCESS for manual use. This report lists vehicles eligible for boot or tow and shows pertinent information, such as the date, time and location of open parking citations for the vehicle, that are valuable tools for locating seizure eligible vehicles. AutoPROCESS is also integrated with the AutoISSUE enforcement application to relay scofflaw information electronically for field identification.

AUTOPROCESS BOOTING PROCESS

When, by the City's business rules, a vehicle becomes eligible for booting they are added to a boot-eligible list. This list is downloaded to handheld devices and LPRs for in-field enforcement. Updated eligibility status is also available on handheld and LPR's instantly and throughout the day via a real-time web service. Real-time connectivity allows the Boot crews to receive timely notification of boots which are to be released because payment has been secured.

The AutoPROCESS Boot module provides the tools that the City requires to identify vehicles that are eligible for seizure. In addition to identifying vehicles as boot or tow eligible, AutoPROCESS monitors the status of vehicles that have been booted or towed. AutoPROCESS is the system of record for boot/tow fees and corresponding violation payments.

Scofflaw eligibility status is viewable online from the Main Inquiry Results screen in the AutoPROCESS system to enable project staff to determine if a specific vehicle is boot/tow eligible and to ascertain if a recent payment may have changed the boot/tow eligibility status of the vehicle. Additionally, a scofflaw list can be printed from AutoPROCESS for analysis or distribution to parties who do not have any system access. This report lists vehicles eligible for boot or tow and shows pertinent information, such as the date, time and location of open parking violations for each vehicle and is a valuable tool for locating seizure eligible vehicles based on amount owed, address and issued dates.

When a boot is placed on a vehicle an authorized user, typically a dedicated "Boot Dispatcher", records the boot event in AutoPROCESS which opens a boot record. The system can also be configured to automatically assess a boot fee when the boot record is created and link both the boot record and fee with any unpaid parking citations. As with all AutoPROCESS records, every edit or update to a boot record is recorded in the online audit trail.

The status of all booted vehicles is available online via the Boot Dispatch screen. This screen allows the user to filter the display to show open boot records, paid boots that have not yet been removed, boots that have been confirmed as removed, cancelled requests and boots that have been in place for more than 24 hours. This screen is automatically refreshed every 30 seconds to reflect the most recent payment activity on booted vehicles. Authorized system users can use the filter options on the Boot Dispatch screen to view records in specific categories.

D. Meter Maintenance & Collections

Duncan's proposal is confined to the STLTO's request for a parking violation management system and does not include services for meter maintenance or collections, which we understand will be awarded through a separate contract. We look forward to working with the vendor awarded to provide these services to best integrate our systems to provide the most efficient on-street operations possible.

1.2 Appendix A – Scope of Services Matrix

We have completed and provided **Appendix A – Scope of Services** as an attachment to this proposal, which can be found in **Section 6. Appendices**.

1.3 Specific Tasks and Proposal Requirements

A. Cost-Benefit Analysis

Financial information regarding software and hardware cost has been provided in a separate and sealed envelope marked **"Cost Proposal"**.

B. Functionality

We understand that the successful respondent must be able to provide a wide variety of parking management services, including a parking management system comprised of several distinct and unique components. Following, we address our back-end reporting capabilities, multi-lingual features, data security, redundancy, integrations, event permit system, waiting list and mass email functionality, and our online web portal for customers.

BACK END REPORTING CAPABILITIES

AutoPROCESS has an easy-to-use management-reporting module that offers access to over 100 standard management reports as well as an Ad-hoc report-writing tool for the development of custom reports. All reports within AutoPROCESS are exportable and printable in multiple formats (i.e., PDF, Excel, Word, etc.), allowing for additional data manipulation, analysis, and reporting. The reports you select can be run on a routine basis and routed to designated staff. Duncan trains all authorized staff how to use the reporting module and the integrated Ad-hoc report-writing tool, and provides initial assistance in the creation of Ad-hoc reports.

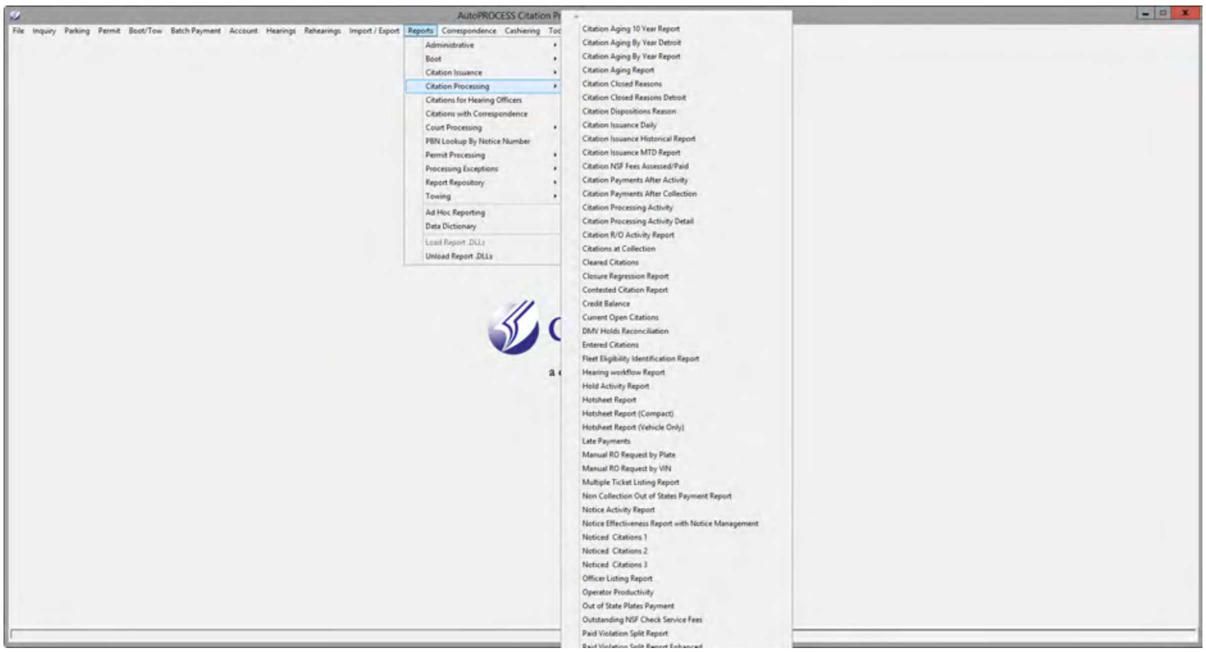
AutoPROCESS Standard Reports

AutoPROCESS provides a powerful and comprehensive suite of standard reports for management review, analysis and decision support directly from the production database. Key information provided from our standard reporting suite include open citations, current balances, payments to date, hot sheet eligible vehicles, aged receivables, citations subject to hearings, and many more.

Sample List of Standard Reports	
Category	**Key Report Name**
Citation Issuance and Control Reports	Violation Summary Report Violation Summary by Area/Zone Report Violation Summary by Officer Report Violation Summary by Infraction Violation Print-Out Citation Book Summary Report Citation Book Detail Report
Processing Reports	Cleared Citations Report DMV Holds Reconciliation Report Current Open Citations Report Citations With Credit Balances Report Outstanding NSF Service Fees Report Citation R/O Activity Report Hot Sheet Report Citation at Collection Report Citation Closed Reasons Report Payments Received Report Payment Batch Summary Report Late Payments Report Out of State Plates Payment Report Contested Parking Citations Report Permit Issued Summary Report Returned Debt/Cancellation Report

	Letters Sent Report Overpayments Reports Correspondence Report
Monthly Summary Management Reports	Citation Processing Activity Report Citation Aging Report Payment Regression Report Summary of Daily Payments Received Report

AutoPROCESS citation processing reports



Our standard reports are accessible by authorized users, run in real-time and offer selection parameters that will ensure the City gets up-to-date information when needed to support day-to-day operational needs as well as organizational planning.

Because there are an abundance of available reports, Duncan has provided a sample report from our standard report inventory. All reports are available to authorized users on their desktop PCs, and are available for saving in PDF format and can be printed locally on an available network printer or printed and distributed by Duncan, as may be required.

Violation summary by area report

Violation Summary by Area Report

Page: 1
Data Type: Parking
Creation Date/Time: 3/18/2016 1:36:12 PM
Issue dates of 03/01/2016 *through* 03/01/2016

Dist: All

Dist: CITY OF MILWAUKEE
Beat: 1
Officer District: 1

% of All Valids: 20.00%
% of All Voids: 0.00%
% of All Fines: 24.07%

Vio Code:	VIODESCRIPTION:	Fine Amount:	Late Fee Amount:	Valid Count:	% of Area Valids:	Area Fines:	% of Area Fines:	Void Count:	% of Area Voids:
640	METER PARKING VIOLATION	$22.00	$6.00	4	80.00%	$88.00	59.46%	0	0.00%
751	TOW-AWAY ZONE (BLOCKING	$60.00	$5.00	1	20.00%	$60.00	40.54%	0	0.00%
Area Totals:				5		$148.00		0	

Dist: CITY OF MILWAUKEE
Beat: 7
Officer District: 1

% of All Valids: 8.00%
% of All Voids: 0.00%
% of All Fines: 7.15%

Vio Code:	VIODESCRIPTION:	Fine Amount:	Late Fee Amount:	Valid Count:	% of Area Valids:	Area Fines:	% of Area Fines:	Void Count:	% of Area Voids:
640	METER PARKING VIOLATION	$22.00	$6.00	2	100.00%	$44.00	100.00%	0	0.00%
Area Totals:				2		$44.00		0	

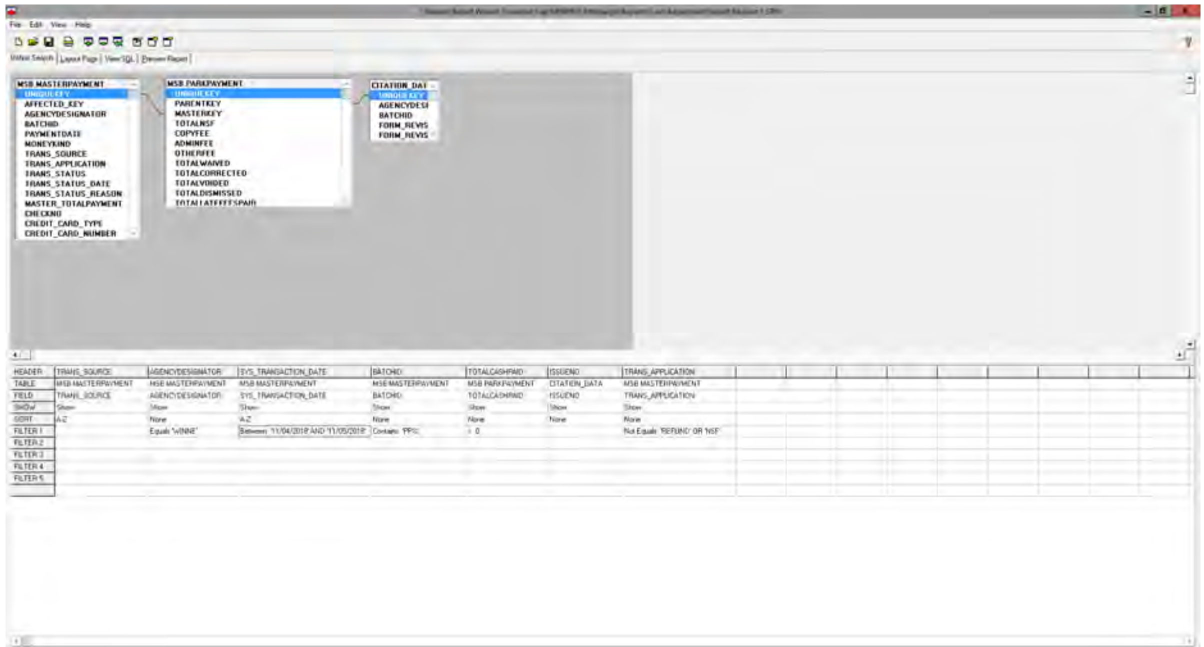
Ad-Hoc Reports

As mentioned previously, our citation processing system includes a powerful, yet user-friendly and fully integrated, Ad-hoc report writing tool that allows authorized users and project support staff to search and analyze data and create online reports as needed. These reports can be printed directly at a user's local or network printer.

Unlike mainframe based citation processing and collection systems' reporting tools in which information is presented in rigid, pre-determined formats and custom reports that require additional programming, AutoPROCESS will allow City authorized users to perform real-time queries of all the information in the production database, providing accurate, up-to-the-minute program information. To the extent that "ad-hoc" reporting is available in mainframe systems, it is typically based on a subset of citation information, which is downloaded into a separate "data warehouse" which is not user friendly and not up-to-date.

The following screen shot depicts the ad-hoc process. Identifying the source of data tables and selected fields, as well as data selection parameters, such as data ranges, is simple and user-friendly. These ad-hoc report queries can also be stored for subsequent use and accessed directly from the AutoPROCESS reports menu. Our ad-hoc reporting system performs real-time queries against current data in the AutoPROCESS Oracle database. At the City's request, we can train appropriate City staff in the use of the integrated ad-hoc report-writing tool and provide initial assistance in the creation of ad-hoc reports.

Ad Hoc Reporting Tool



The AutoPROCESS ad-hoc reporting application provides a user friendly tool for authorized users to create customized reports using up-to-date data from their own desktops.

BUSINESS INTELLIGENCE PLATFORM

Duncan chose to partner with Smarking for its business intelligence platform because no other organization maintains such a singular focus on parking business intelligence solutions.

Based on the content of the STLO's RFP, we believe that Smarking and the City share a common expectation on how a parking business intelligence platform should be built, what it should do, how it should be supported, and the value it should deliver.

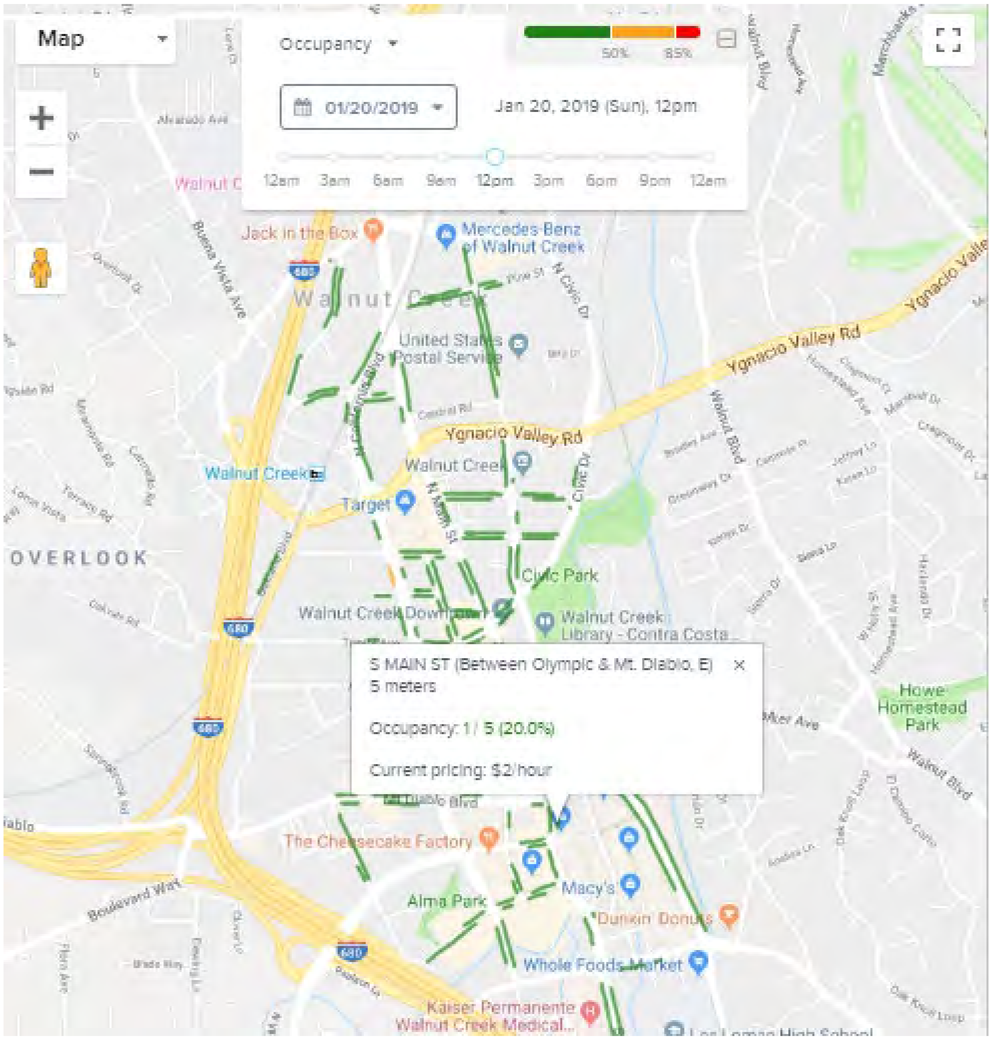
BUSINESS INTELLIGENCE HIGHLIGHTS

- **Best-in-class business intelligence software –** Built by MIT PhD's – The Smarking system leverages transaction level data from any and all parking systems, and provides a holistic understanding of all parking dynamics required by the City.
- **Parking data and management experience –** Smarking has been deployed by more than 2,000 parking locations and supports over 45 unique real-time data integrations. With more than 450 extract-transform-load (ETL) jobs running – there is no organization more familiar with the nuances of parking data than Smarking.
- **Rapid time-to-value –** Smarking's average time to deployment for its business intelligence (BI) solution is less than two months.
- **Open systems and flexibility –** Smarking's off-the-shelf systems and integrations are built and ready to go, all with the ability to configure to a user's needs, better than any other vendor. This means the software conforms to the City's needs, and not vice versa.
- **Open API's for third-party integrations -** Smarking includes open API's for both data import and export, allowing for easy connectivity to other systems, and enables the City to be a leader around smart city and data connectivity initiatives.
- **Industry leadership –** Smarking is going on five years of industry leading and intuitive business intelligence, analytics, and yield management. As mentioned above they've been delivering these solutions in over 2,000 locations, while others are struggling to catch up.
- **A top-tier team -** Companies are characterized by their employees. Smarking has attracted and retained the best staff in the industry, starting with its executive team, but more importantly, with the teams who work directly with its clients.
- **Client support –** Smarking values and respects its partners and supports them with clear, open communication, rapid response, and professional execution. Smarking anticipates that issues will arise, and in those rare instances, they tackle them - with the City's help - as quickly and clearly as possible.

PUBLIC FACING TOOL

Smarking's software is powered by a suite of industry leading API's that are leveraged to communicate relevant metrics (including occupancy, revenue and duration) onto third-party platforms – including websites, mobile applications, and connected cars. For public communication, Smarking's preference is to embed occupancy and other key metrics onto a Google Map layer, embedded as an iFrame on a website maintained by the City, enabling users to explore occupancy patterns by day and by hour across all on and off street inventory. A sample screenshot follows.

Occupancy patterns



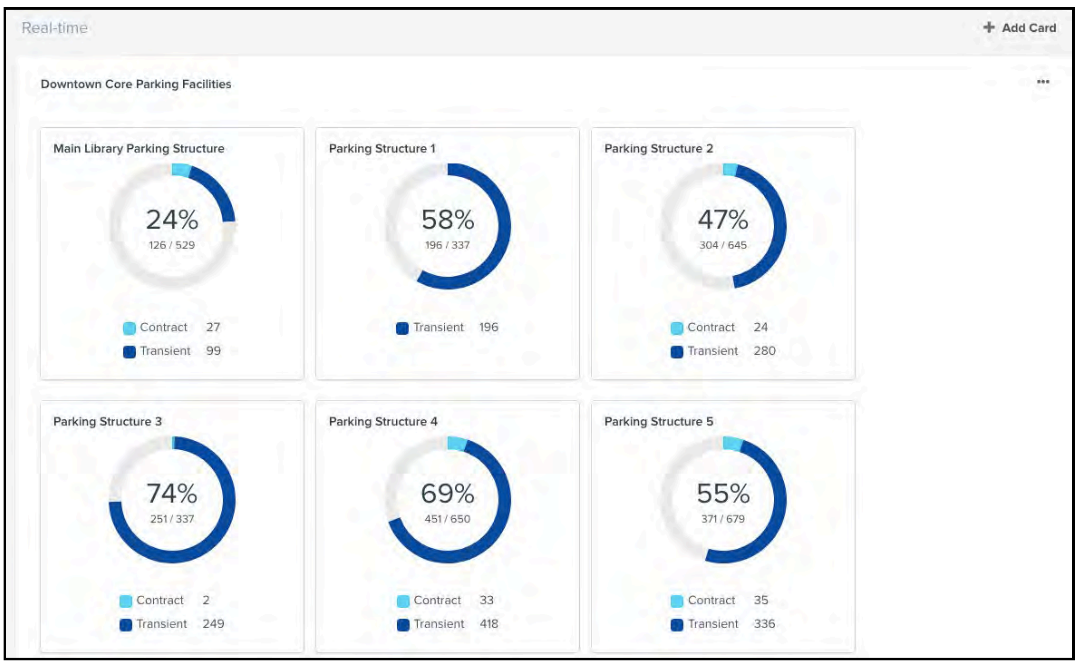
Smarking's preference is to embed occupancy and other key metrics onto a Google Map layer, embedded as an iFrame on a website maintained by the City. This enables users to explore occupancy patterns by day and by hour across all on- and off-street inventories.

The Smarking business intelligence platform will enable City staff to visualize key metrics on their desktops, tablets, and mobile devices. Graphs can be populated in bar charts, line charts, heat maps, etc. The colors of each legend are customizable to each user. Currently, graphs and data can be exported into PNG, PDF and CSV (excel friendly) formats. Highlighted metrics calculated by Smarking are:

- **Real Time Monitoring –** data is updated every 5-10 minutes across Parkeon, Metric, HUB and Parkmobile systems (Note: Certain versions of HUB only allow for nightly data retrieval, Smarking will need to do more research to ascertain the HUB version the City is working with before promising "real time" functionality at those locations.)

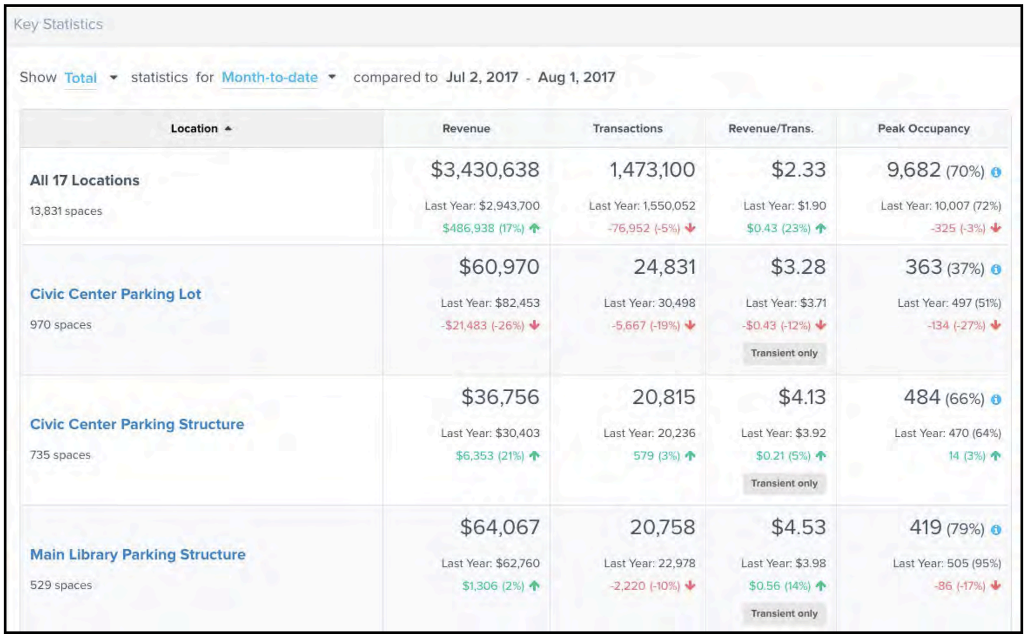
- **Occupancy and revenue predictions –** Smarking uses a machine learning algorithm to forecast occupancies and revenues up to 30 days in advance
- **Operational analytics around specific parking locations or groups of parking locations in varied time frames –** Smarking will create individual "locations" to allow City staff to analyze parking data across all of its parking inventory, configured to the City's specifications
- **Occupancy analysis –** City staff can explore occupancies across all parking facilities: over time, on average by weekend, weekday, or specific day of week along with entry and exit analysis
- **Revenue analysis –** City staff can explore revenues across all parking facilities, over time and in various segmentations
- **Duration analysis –** City staff can explore parking durations across all parking facilities in raw transaction numbers or as a percentage of transaction, in aggregate, or segmented based on a specific time of entry with respect to day of week or time of day

Portfolio view: real-time occupancy



Divide parking locations into relevant groups. Add cards that display real time metrics for each facility, like real time occupancy, occupancy forecast, and leaderboard.

Portfolio view: key statistics


Key Statistics

Show Total ▾ statistics for Month-to-date ▾ compared to Jul 2, 2017 - Aug 1, 2017

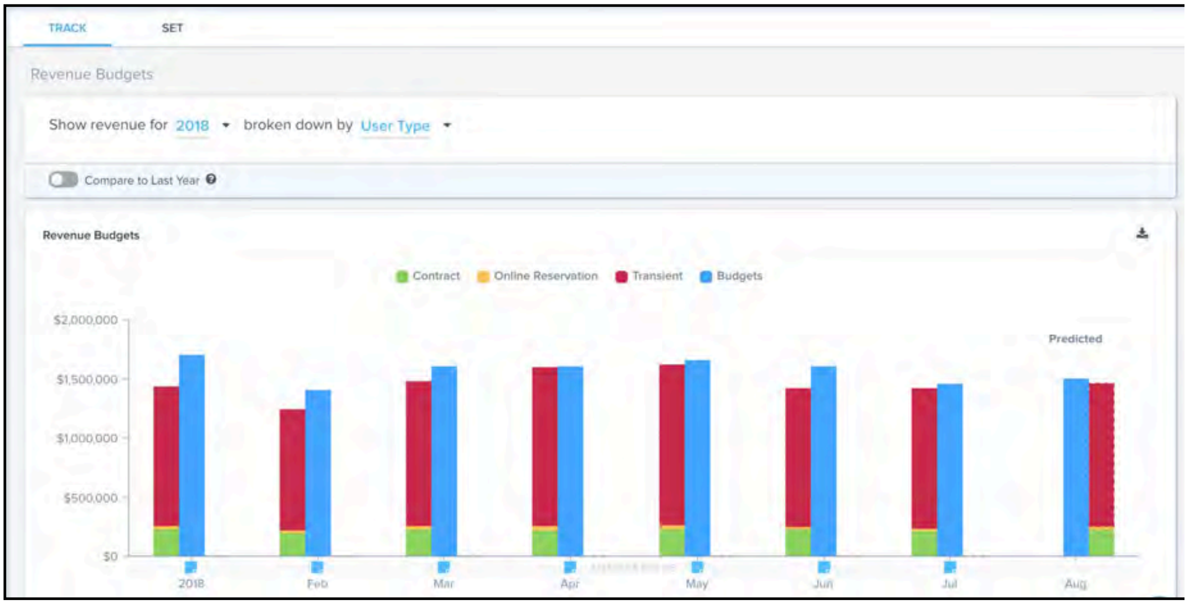
Location ▲	Revenue	Transactions	Revenue/Trans.	Peak Occupancy
All 17 Locations 13,831 spaces	$3,430,638 Last Year: $2,943,700 $486,938 (17%) ↑	1,473,100 Last Year: 1,550,052 -76,952 (-5%) ↓	$2.33 Last Year: $1.90 $0.43 (23%) ↑	9,682 (70%) Last Year: 10,007 (72%) -325 (-3%) ↓
Civic Center Parking Lot 970 spaces	$60,970 Last Year: $82,453 -$21,483 (-26%) ↓	24,831 Last Year: 30,498 -5,667 (-19%) ↓	$3.28 Last Year: $3.71 -$0.43 (-12%) ↓ Transient only	363 (37%) Last Year: 497 (51%) -134 (-27%) ↓
Civic Center Parking Structure 735 spaces	$36,756 Last Year: $30,403 $6,353 (21%) ↑	20,815 Last Year: 20,236 579 (3%) ↑	$4.13 Last Year: $3.92 $0.21 (5%) ↑ Transient only	484 (66%) Last Year: 470 (64%) 14 (3%) ↑
Main Library Parking Structure 529 spaces	$64,067 Last Year: $62,760 $1,306 (2%) ↑	20,758 Last Year: 22,978 -2,220 (-10%) ↓	$4.53 Last Year: $3.98 $0.56 (14%) ↑ Transient only	419 (79%) Last Year: 505 (95%) -86 (-17%) ↓

Understand historical statistics across all locations benchmarked against the same period that occurred 52 weeks ago, ensuring a day-to-day comparison.

Revenue analysis: revenue comparison

Revenue can be broken down by any period of time, by any grouping of revenue, and by any available data breakdown metric.

Revenue analysis: budget comparison



Quickly compare actual figures versus budget figures for any time period.

Competition analysis: online rate survey


Online Rate Survey | Wayne Tower

Compare rates on All Sales Portals for Monday - Friday between 05/16/2018 — 05/23/2018 within 1 mile of this garage

Location	333 E 14th St. - Valet Garage	347 E 17th St. - Valet Garage	318-326 E 15th St. - Valet Garage	310 E 11th St. - Valet Garage	329 E 21st St. - Valet Garage	245 E 19th St. - Valet Garage	329 E 22nd St. - Valet Garage	200 E 15th St. - Valet
Distance	1193 ft Hide	1296 ft Hide	0.3 mi Hide	0.3 mi Hide	0.4 mi Hide	0.4 mi Hide	0.4 mi Hide	0.4 mi Hide
6:00 am for 3 hours	$21	$21 - $24	$15 - $21	$19 - $25	$24 - $45	$46	$23 - $45	$32 - $91
2:00 pm for 3 hours	$22	$15 - $24	$16 - $21	$19 - $40	$45	$35 - $46	$45	$18 - $20
5:00 pm for 5 hours	$20 - $25	$12 - $23	$12 - $15	$19 - $40	$45	$35 - $46	$45	$20 - $21

Add Time Range +

Understand which price competing garages within a mile are charging on online reservation sites. This can be broken down by period of time, day of the week, hour of the day, and length of stay.

Alerts

Receive a text message or email when occupancy rises above or falls below a certain occupancy threshold and a variety of other program metric changes.

MULTI-LINGUAL FEATURES

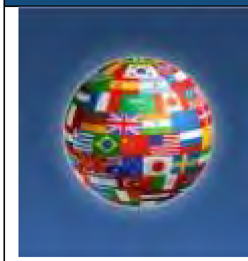
To accommodate speakers of other languages, Duncan contracts with Language Line, a worldwide leader in interpretive services. Through Language Line, we are able to communicate clearly within a matter of seconds with customers, speaking more than 170 languages. These services are available during call center hours when our representatives are available to provide assistance.

Additionally, Duncan's IVR system speaks English and Spanish and our Customer Service/Call Center is staffed with a minimum of two Spanish-speaking representatives during regular business hours.

Website Translation Services

We understand STLTO has a diverse population. For online self-service portals, we will include the Google Translate function that will allow the user to instantly translate the page, choosing from over 100 languages.

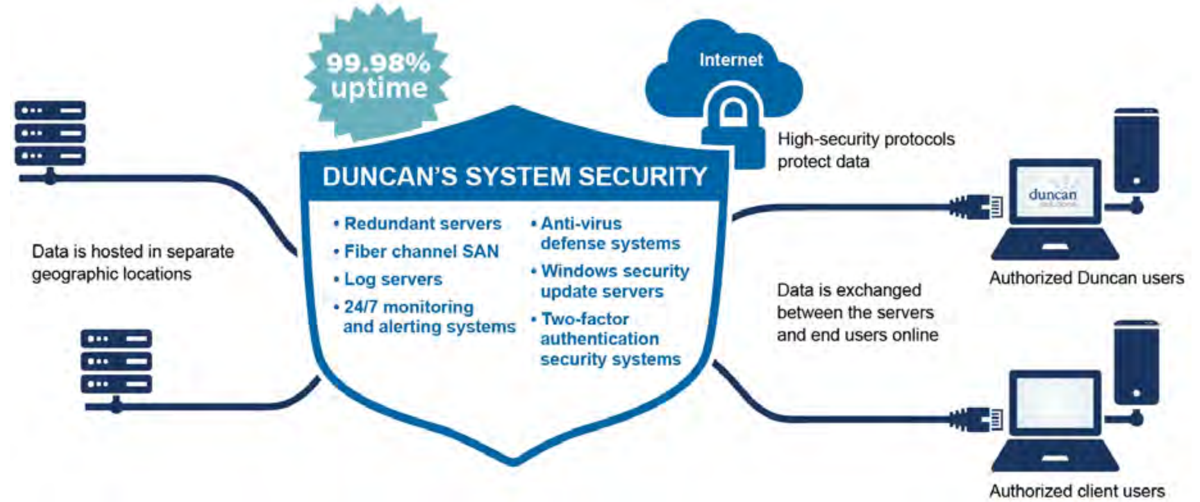
Google translate language support

Google Translate Language Support						
	Belarusian	Esperanto	Hungarian	Latvian	Polish	Swedish
	Bengali	Estonian	Icelandic	Lithuanian	Portuguese	Tajik
	Bosnian	Filipino	Igbo	Macedonian	Punjabi	Tamil
	Bulgarian	Finnish	Indonesian	Malagasy	Romanian	Telugu
	Catalan	French	Irish	Malay	Russian	Thai
	Cebuano	Galician	Italian	Malayalam	Serbian	Turkish
	Chichewa	Georgian	Japanese	Maltese	Sesotho	Ukrainian
	Chinese	German	Javanese	Maori	Sinhala	Urdu
Afrikaans	Creole	Greek	Kannada	Marathi	Slovak	Uzbek
Albanian	Croatian	Gujarati	Kazakh	Mongolian	Slovenian	Vietnamese
Arabic	Czech	Hausa	Khmer	Myanmar	Somali	Welsh
Armenian	Danish	Hebrew	Korean	Nepali	Spanish	Yiddish
Azerbaijani	Dutch	Hindi	Lao	Norwegian	Sudanese	Yoruba
Basque	English	Hmong	Latin	Persian	Swahili	Zulu

DATA SECURITY

Duncan has engineered security solutions to incorporate the most secure methods of data access and transport possible. Our ASP model uses SSL client connections and IPSEC VPN technology. Data Center perimeter defense systems consist of dual firewalls equipped with intrusion detection (IDS), and intrusion prevention systems (IPS). We not only detect, but also prevent unwanted malicious attacks to corporate systems. Each network segment is controlled by a strict access control list (ACL) based security model. The ACL limits communication by port and IP address between specific network segments providing communication for only approved systems. Internal vulnerability scans are performed on all internet-faced applications and servers quarterly and are conducted annually by a third-party security-auditing firm.

System security summary



Duncan's redundant server architecture and 24/7 monitoring result in outstanding system uptimes well in excess of 99%

All administrator level access to systems and data at the data center requires 2-factor authentication. In addition, Duncan adheres to a strict change management process controlling changes to the production environment. File Integrity monitoring for all files on key application servers are enabled.

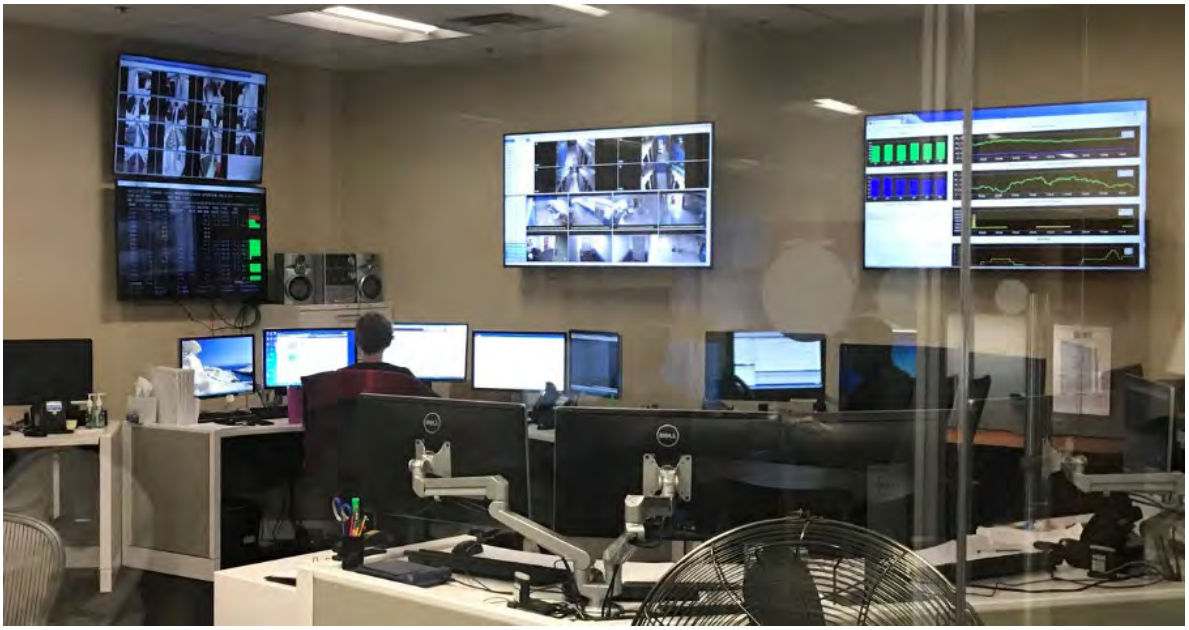
All data transmitted uses industry standard methods to protect sensitive data. With AutoPROCESS, this is accomplished using Citrix XenAPP 7.6. Beginning with this version of Citrix, data traffic is secured from user devices, hosted desktops, and applications using Transport Layer Security (TLS) protocol encryption. In addition, we encrypt the data at rest using SAN-level encryption. Data retrieved or sent from external sources is accomplished through secure file transfer protocol (SFTP) with the exception of the California DMV. The California DMV mandates that we use the TN3270 protocol, which is not encrypted for the real-time data exchange. That being said, the DMV data is transported over a secure VPN connection.

Operations center – server room

Site Security

Duncan maintains security for physical environment access, office materials and reports access, network access, application access, and database access. Our data center IT staff and office management staff review security statuses, identify potential vulnerabilities, and research available enablers to ensure we keep our physical and technology environments thoroughly protected from outside threats. In addition, every employee who has access to client information is bound by company policies to ensure customer data is treated with the utmost level of confidentiality. As published in company guidelines, any violation regarding these company policies are met with disciplinary actions up to and including employment termination.

Operations Center – Security



Specialists and systems watch over data and networks — all day, every day — protecting information, and anticipating and addressing issues before they even happen. In addition to monitoring data (i.e. website and phone center traffic and response times) we track issues, such as extreme weather events that may cause unusual activity. It's all part of our commitment to keeping clients' data available and secure.

User Security

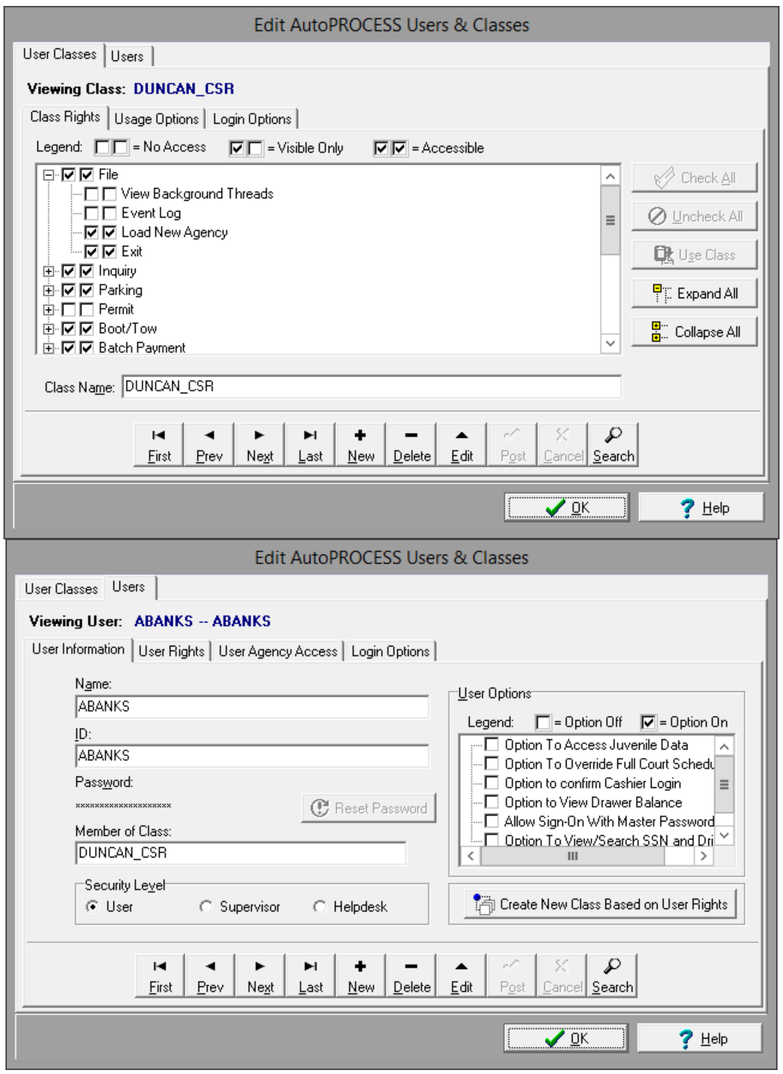
AutoPROCESS provides internal audit trails and transaction histories that assist Support Services in fulfilling their responsibilities. All transactions are recorded in the system with transaction type and details, date/time stamp, identification of the individual or process that initiated the transaction and the values in affected data elements both before and after the processing of the transaction. These features make it easier for Support Services staff to analyze individual transactions and to use our Ad Hoc reporting and query features to identify patterns of activity and pull groups of transactions for review.

All authorized users are assigned unique User IDs/identification numbers for AutoPROCESS. Access to the system and any data stored therein, including registered owner data, is User ID and Password controlled. As is the case in all Duncan projects, users that require access are assigned a "user profile" which defines the modules and the specific functions within a module that the user can access. In addition, a user may be granted authority to view certain data but not to edit or otherwise manipulate that data. For example, we maintain a strict "separation of duties" policy regarding the ability to update outstanding balances.

Users who handle payment media (cash, check, money order, and credit cards) are not generally granted the authority to adjust the amount due on a citation record by any means other than the posting of a payment transaction. Likewise, users who are authorized to adjust balances for reasons such as authorized voiding of a citation are not allowed to handle payment media.

Similarly, certain user groups can be granted the update capabilities for suspensions or dispositions, while other groups will be granted inquiry access to those functions. The AutoPROCESS password features allow us to configure users' profiles to define access capabilities, ensuring this policy is adhered to. The Duncan Team will work with STLTO to refine its current user profiles as required to prevent any unauthorized use of the system.

User Security Profiles



Each system user is individually set-up with a unique user profile, ensuring each user is only permitted to use appropriate functionality. Repeatable user classes can also be established to make future employee profile setup quick and easy.

Access to the AutoPROCESS system and each agency's data is password controlled. Our Implementation Project Manager will work with STLTO to refine access profiles, IDs and initial passwords for additional citation processing feature as required. Each user can also have the ability to change their individual password at any time. Additionally, all or individual passwords can be changed on a regular basis to ensure password security. Passwords can be set to expire on a regular basis requiring each user to create a new password and time out limits can be set to prevent unauthorized access. The Duncan Team support personnel are also available via our Help Desk to assist staff with forgotten passwords or locked accounts.

Data Backup and Redundancy

Duncan realizes that a comprehensive citation processing solution is not simply about delivering intuitive system functionality, but also about protecting sensitive data and preserving the system integrity that our clients' revenue systems rely upon. Through carefully reviewing and analyzing industry benchmarks to apply best practices and proven methodology, we have developed a comprehensive and dependable system back-up and recovery process that ensures we are not only prepared in the event of a disaster, but also that our clients will experience minimal disruption to their operations. Our DRP applies to our vendor-hosted operating model.

Duncan's data and system backup and restoration strategy uses the Arcserve Unified Data Protection (UDP) primary and secondary appliance configuration.

Duncan uses the Arcserve UDP appliances for solid-state disk drive data backups. The Arcserve UDP configuration consists of a primary Arcserve UDP appliance at the main colocation facility and a secondary Arcserve UDP appliance at the Duncan Solutions backup Disaster Recovery facility.

Duncan backups are used to safeguard data and provide recovery for data deletions or corruption, server failure, provide snapshots of servers, recovery for disaster recovery, business continuity, and site failure. Duncan Solutions IT backs up specific data areas on all servers and disk storage. Data including email, shared file systems, databases, security logs, transaction logs, operating system files, system state, and active directory information are backed up on a consistent reoccurring basis backing up data that has changed since the initial full backup. The Arcserve deduplication functionality assures the backups do not duplicate data being backed up to minimize storage requirements and maximize data backup speeds. Data is continuously replicated to the backup DR site and the secondary Arcserve UDP appliance ensuring a near real time replication of the primary data center data.

To ensure that both the Arcserve UDP appliances and backup procedures function properly, restore tests are performed and verified once a week by the designated Backup Administrators.

As part of our standard data management process, Duncan performs automatic, nightly backups of the database to provide historical archives and to support disaster recovery. Should the most remote worst-case scenario occur, Duncan maintains historical backups and logs of the full database that will be used to restore system functionality.

In the extremely unlikely event that the database should have a catastrophic failure, the system will be put back into operation by restoring to the last good backup and using the archive log to replay the last transactions. However, in virtually all failure scenarios, the actual restoration of the system will be transparent to the end-user due to the many hardware and software layers of redundancy that will keep the system in operation 24/7.

Our ASP-model ensures full scalability, high security, optimum availability and exceptional response time. AutoPROCESS runs on a proven Oracle database engine and is easily customized to meet STLTO specific requirements. Extensive use of definable parameters and rules tables allow the application to be quickly and accurately configured during our proposed upgrade process. The structure of the application and the database allow us to customize modules to meet the evolving needs of STLTO.

Duncan also takes a multi-pronged approach to provide high redundancy and system reliability. We use the following methods to ensure survivability of the system:

- Every key system will be redundant and configured in an N+1 manner. Loss of one server will automatically fail-over to the redundant server.
- Every server will have UPS backup power. Loss of line power will not influence the servers for short-term loss of power.
- Servers will have generator back up power. System operation can be extended beyond the time supported by just a UPS.
- Servers and server pairs will be geographically dispersed.

INTEGRATIONS

Through our years within the parking industry, we have developed partnerships with countless vendors to ensure complete system integration capabilities, some of which include: **Parkmobile**, Pay by Phone, **Parkeon**, Paylock, New World Systems, Pango, **CivicSmart**, Tyler Technologies, Park Now, Genetec, Manatron, Metric, ACE Software, Gtechna, **Smarking**, Lawson, Passport, HUB, TIBA, Sanef, **iNovah**, and ELSAG,

The table below shows a partial list of the parking vendors whose systems are integrated into CivicSmart's AutoISSUE and PEMS solution.

CivicSmart's Smart Parking Integrations	
Component	**Description**
Vehicle Detection Sensors	• CivicSmart sensors & gateways • GE intelligent light fixtures
Handheld Enforcement Technology	• AutoISSUE enforcement software • Duncan Solution's AutoPROCESS software • Panasonic FZ series • Zebra/Motorola/Symbol handhelds and printers • Two Technologies N5 series • Samsung mobile devices

	• Casio • Intermec • AirWatch
Mobile Payment Applications	• Parkmobile • Passport Parking • Pango Parking • MobileNow • PaybyPhone • GoParkIt
Parking Meters	• CivicSmart's Parking Enterprise Management System (PEMS) • CivicSmart's Liberty Next Gen Smart Meter • T2 Systems/Digital • Parkeon • Cale America
Other Third-Party Integrations	• Genetec (LPR) • Parkopedia (parking inventory aggregator) • Smarking (parking data analytics) • Dynamic/variable message signs • Various records management systems • Various court and citation processing systems

EVENT PERMIT SYSTEM

Duncan can provide STLTO with a customer-facing website for the purchase and renewal of event parking permits. Customers can select the permit they wish to purchase and upload the required documentation, per STLTO's business rules. The website is fully integrated with AutoPROCESS for permit issuance, tracking, and management. The solution includes a workflow tool for streamlined back-end review and approval process for STLTO staff.

Duncan's online permit website uses logical flow, large fonts and buttons, and mouse-over tool tips, providing a clear and simple customer experience.

Duncan's AutoPROCESS system will provide STLTO all of the required functionality for users to maintain complete permit account profiles. This functionality is accessible to STLTO users and enables permit entry, inquiry, and management. The AutoPROCESS parking permit functionality fully supports permits with a wide variety of zone definitions, durations, and constituencies, such as:

- City stickers
- Monthly permits
- Student
- Motorcycle
- Property owner permits
- Annual permits
- Daily permits/passes
- Visitor
- Residential
- Employee
- Construction/contractor
- Caregiver
- Events

A well-designed online permit component is a customer-friendly alternative to the traditional model of parking permit purchase or renewal that frequently entails a visit by the customer or submission of forms and other material via USPS mail. Our solution allows customers to complete the process from the comfort of their home while still providing the documentation required to verify their permit eligibility. It also substantially streamlines the back-office processes for permit approval and fulfillment and reduces the number of customer walk-in visits to the customer service center.

The all-in-one sales workflow allows the addition of the permit-holder(s) data, the associated vehicle(s) data, the permit type(s) data, and the payment data all in one screen, without having to jump between many forms to complete a permit sale. The system also can validate addresses entered against the system inventory of permitting districts–and the regulated streets and addresses within these districts–to limit sales of district specific permits to addresses within the specific district.

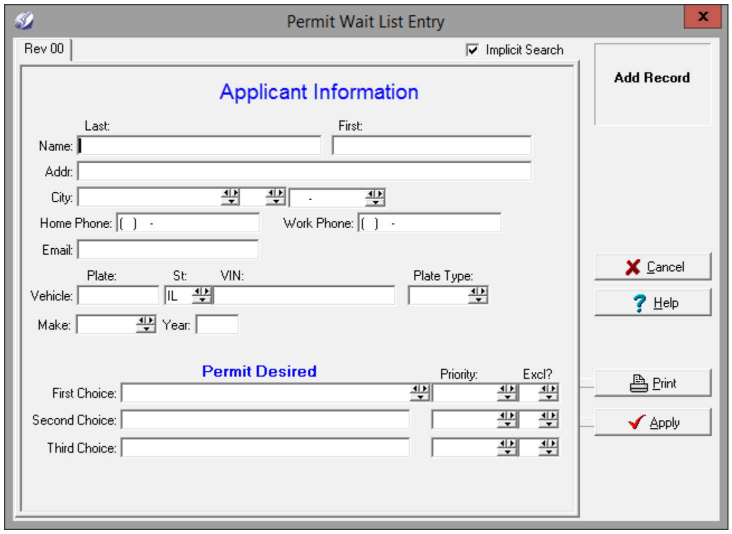
Waiting List and Mass Email Functionality

AutoPROCESS can limit the number or types of permits issued to a user or address by capping the number of permits or types available for purchase. The system also allows staff to set different caps by permit type and permit area. Permit limitations will be set during implementation. Emails to customer-provided email address for alerts, updates, or other mass communication blasts is a feature of the integrated Customer Account website—allowing greater citizen interact that ever before possible.

<u>Permit Waitlists</u>

Duncan's permit system supports a convenient waitlists menu that supports waitlists by type or permit zone depending on requirements. The waitlist management is structured by "earliest requested order" to ensure motorists are given a fair process. In addition to recording and maintaining a waitlist, this menu can also be used to generate reports listing the number of total spaces available, total spaces occupied and the number of unoccupied spaces. Using this information, we can also configure waitlist alerts to notify appropriate systems users when areas become full or when spaces become available.

Integrated permit waitlist functionality



AutoPROCESS's integrated permit waitlist functionality allows users to maintain waitlists by type or permit zone depending on requirements.

ONLINE CUSTOMER ACCOUNT – WEB PORTAL

If awarded, Duncan will implement a customer account management function, called MyPortal, that can be accessed by logging into our secure site. Customers that want to establish an account simply provide an email address, vehicle license plate numbers and other user information. We then create and maintain an account that lists the customers' current citation status, offers due date alerts for citation payments, provides city alerts, etc. We've provided an example of the customer account website below. MyPortal is a great customer service offering in addition to our other online portals; customers who prefer simply to make a payment can do so through our online payment site without setting up an account through the MyPortal system.

Through STLTO staff collaboration with Duncan, we will develop high-quality content including materials to guide users on parking rules/regulations and other program information and posting transportation and parking-related alerts. Because we provide monthly utilization and analytical reports on website usage, STLTO can calibrate the site to optimize utility by making its own updates. Using our services, authorized STLTO staff are able to update this website in a point and click, web-based interface without relying on their IT department or by having in-house understanding of web code.

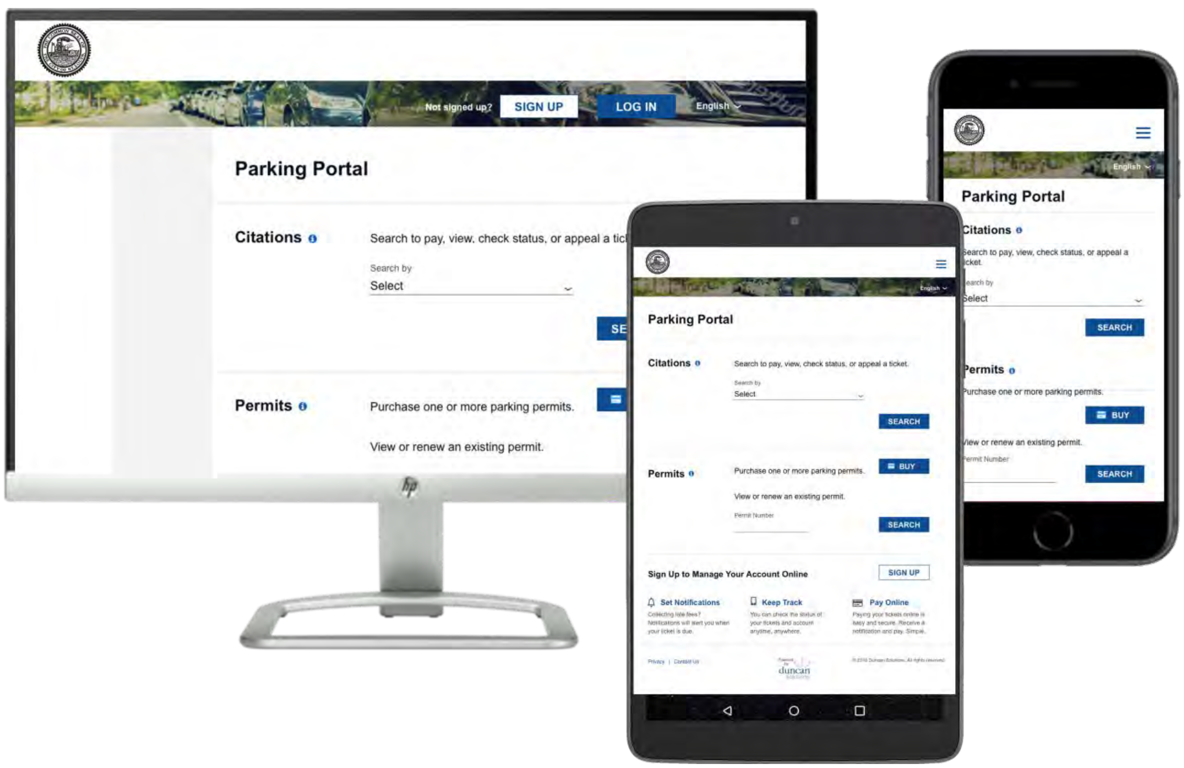
Directly from the City's website, customers will be able to access Duncan's customer account portal that gives customers greater access and ability to manage their citations, permits, and other parking related items from a comprehensive location. Customers can setup an account on our secure site by providing us with an email address, vehicle license plate and other additional user information. We verify this information and then create an account that gives customers a single portal to connect to Duncan's online services. Enrolled customers can:

- View violation information and images

- Pay or contest a citation
- Check citation status
- Get answers to questions
- View citation and payment history
- View originally issued citation and late notices
- Set up email alerts to be notified of due dates, late fees, secondary collections eligibility, boot or tow eligibility, DMV hold status or other processing statuses
- Receive alerts directly from the City

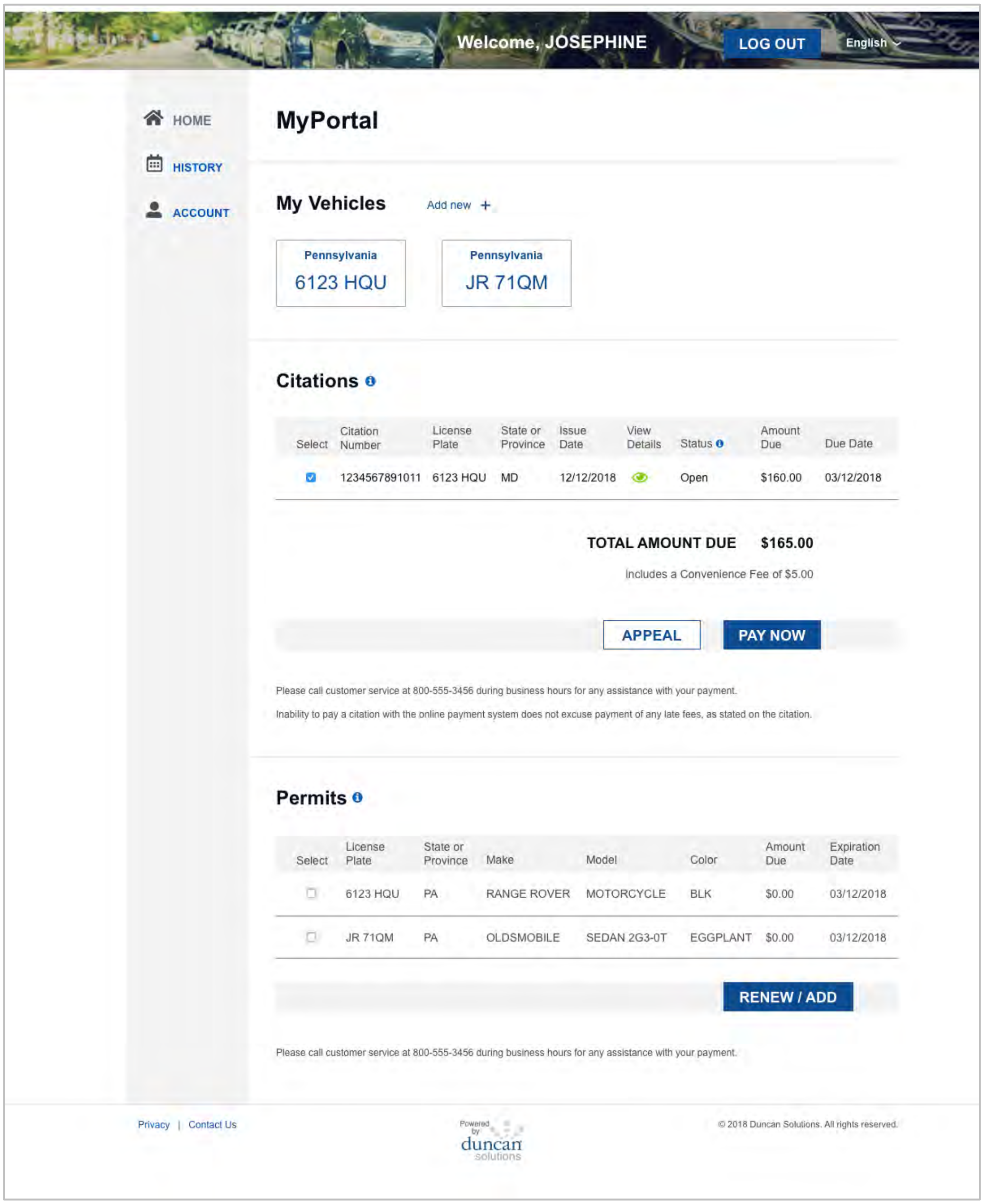
The portal is branded per STLTO's website brand guidelines and maintained by Duncan. The following images depict our preliminary design for STLTO's new customer portal.

Account portal



Whether visiting on PC, tablet or smart phone, Duncan's customer account portal is configured for easy viewing and available in a wide variety of languages, via an embedded language translation tool. Creating and maintaining an account is quick and easy. Forgotten passwords are also easily retrieval through an email verification process, familiar to users of other popular account-based websites.

MyPortal Home



MyPortal allows customers to register their plates, view, and pay all of their citations conveniently and efficiently with a single transaction. Motorists can also opt to contest eligible citations directly through the portal – including the ability to easily upload documents securely. Buying and renewing permits is also easy online.

Duncan will also work with the City to design a Parking Citation Status Page, which is linked through the City's parking website. This page is fully integrated with AutoPROCESS, so all online inquiries from the City's customers return real-time status data. This status page provides another option for a customer to review the status of a citation(s).

- View the current amount due
- Check review and hearing status, including disposition and due date information
- View citation photos

Citation inquiry and image review

Users can conveniently inquiry citations through a variety of intuitive methods and view citation status, associated photos, originally issued citation, notices sent and payment history.

The customer account management function is accessed by logging into our secure site. Customers who want to establish an account simply provide an email address, vehicle license plate numbers, and other user information. We then create and maintain a secure account that lists the customer's current citation status, offers due date alerts for citation payments, provides city alerts, etc. However, customers who prefer simply to make a payment can do so through our online payment site without setting up an account through our system.

C. Maintenance and Service

TRAINING

While our solutions have proven to be intuitive and user-friendly, Duncan offers comprehensive user training sessions to ensure complete knowledge transfer and ongoing proficiency.

We define training requirements and tailor our training materials, approach, and timing to meet the City's requirements based on the scope of work, specific responsibilities, and the experience level of the individuals involved in supporting or providing ongoing services. This will also include initial training, training for new users, and on-going refresher training for experienced users – and can be provided.

As part of our overall transition approach, Duncan will work collaboratively with the City's agency to identify and agree on key elements of the training program, including specific topics required for training, identification of power users and key personnel, identification of training materials and available facilities, and measurable criteria to help determine organizational readiness for implementation. Once the key activities, personnel, materials and other transition items have been identified and mutually agreed upon, Duncan will refine our baseline-training plan and materials to accommodate the knowledge transfer process.

Concurrent with this process, the Duncan Team will work with STLTO to prepare/tailor operational procedures to be used in day-to-day program operations, as well as an overview of the overall solution configured specifically for STLTO. The resulting procedures and solution description will be in a format agreed upon by STLTO and subject to STLTO participation for procedural crafting, decision support, review, and final approval.

As with many of our clients, it is our assumption that STLTO will embrace a train-the-trainer approach so that it can develop internal "go-to" personnel who will promote program acceptance and ongoing support. As indicated earlier, the Duncan Team will work with STLTO to provide on-going training and support for the life of the contract. Any request for future on-site training will be mutually agreed upon prior to proceeding.

While many clients have found our products easy and intuitive to use, the Duncan Team provides a comprehensive, rigorous training program for our clients, and internal personnel to ensure their on-going level of expertise regarding the use of tools, techniques, methodologies and procedures used to optimize results from an issuance, processing and collections program. Working together with our clients, we tailor each training activity to meet the requirements of our clients based on program requirements, specific responsibilities, and the experience of those individuals involved in supporting or providing ongoing services.

Included below, we have provided an overview of our planned approach to help ensure a smooth knowledge transition for efficient and effective day-to-day program operation.

Training Program – Citation Issuance

Duncan will provide a training program that will be geared toward enforcement officers responsible for citation issuance and enforcement management. This will include Parking Enforcement Officers (PEO) as well as appropriate tow personnel and the like. We assume your agency will identify selected personnel who have functional knowledge for on-street enforcement and back office operations for the enforcement function. These personnel will help make decisions as we configure and customize solution components to meet your unique requirements as well as the handheld device selected. They will be the first recipients of knowledge transfer for the resulting solution areas and act as "go-to" resources for your agency for its day-to-day enforcement and supporting operations staff.

The basis for training will be the features, functions, and procedures to be retained by your agency after program implementation. Duncan will initially provide a training environment that will mirror the final production environment once all configuration and customization has been completed. Initial sessions will occur by the use of a handheld device Emulator. This electronic program runs on a desktop PC and provides for initial functionality validation. In addition, it supports on-going training for new personnel as well as refresher training for existing enforcement staff.

Training Program – Parking Citation Processing

Duncan provides a training program that is geared toward training all agency personnel responsible for parking citation processing and permit management related activities. We anticipate you will identify selected personnel who have functional knowledge for specific areas of business operations related to citation processing. These personnel will help make decisions as we configure and customize solution components to meet the requirements for your agency. They will be the first recipients of knowledge transfer for the resulting solution areas and act as "go-to" resources post implementation.

Duncan will leverage its existing training materials to introduce initial solution concepts and capabilities, then, work with you agency's assigned Project Manager to reshape and finalize training curriculum and content for operational staff training sessions. The basis for training will be the features, functions and procedures to be retained after program implementation. The Duncan Team provides a development database instance that will mirror the final production environment once all configuration and customization has been completed for your agency.

Initial Training

Prior to implementation, Duncan typically provides onsite, hands-on, classroom training or workshops for each implementation. Training sessions for key personnel occur early in the process to provide initial orientation, support for configured solution testing and to promote synergies for overall solution acceptance. Timing and session durations generally remain flexible based on topic areas, requirement complexities, timeliness of decision making, actual configuration, testing scenarios, contingency for solution rework and mutual agreement on requirements for end user training.

Training for end-users typically occurs closer to the planned implementation date. We have assumed that end user training will be conducted by Duncan trainers with support from key "go-to" agency personnel. Based on our experience, each session should be planned for 2 to 4 hours and is best facilitated with class size up to 15 to achieve optimum results.

While the Duncan Team is fully trained in our tools, techniques and methodologies, we will assemble the dedicated staff and share internal staff that will support your agency and provide specific training to ensure a clear understanding of responsibilities, procedures, performance measures, and mutually agreed upon programs outcomes. These training and information sharing sessions will cover all functional areas of responsibility to be assumed by Duncan such as:

- Manual citation data entry
- Document imaging, storage & retrieval
- Call center customer service
- Payment deposits & reconciliation
- Management reporting
- Notice processing
- Inbound correspondence processing
- Cashiering center customer service
- System administration & support
- Program/project management

As indicated earlier, we will work closely with STLTO to devise a final training program that will have the most favorable impact for operational readiness and subsequent implementation. Prior to implementation, the Duncan Team will perform an operational readiness assessment. The intent of this effort is to ensure that all procedures are in place, agency personnel have been sufficiently trained, support components are on alert and the organization is willing to commit to implementation.

Preliminary Training Plan		
Key Activities	Description/Key Outcomes	Considerations
Handheld Device Training	Includes issuance device features and functions and is conducted using the select handheld device(s). These workshops typically include a review of features STLTO will use such as citation issuance, time limit marking, scofflaw management, digital photo taking, voice recording, meter enforcement, boot/tow enforcement, abandoned vehicle enforcement and the like.	**Anticipated Duration** – 2-4 hours **Number of Sessions** – 1-2 for key "go to" personnel [2-4 for end users] **Attendees** – Anyone responsible for on-street electronic enforcement
AutoISSUE Training	Includes a general review of the citation issuance management system features and functions. This workshop will be conducted at an AutoISSUE enabled workstation for selected personnel and includes a review of features such as citation downloads, uploads and available reporting.	**Anticipated Duration** – 1-2 hours **Number of Sessions** – 1-2 for supervisory personnel **Attendees** – Back officer enforcement management staff
Solution Overview	For management and other key personnel and will include but not be limited to overall solution capabilities, operational responsibilities and ongoing support strategy.	**Anticipated Duration –** Two (2) hours **Number of Sessions –** One (1) **Attendees –** STLTO Management discretion based on facilities
AutoPROCESS General Training	This training component includes system access, security, basic inquiries, maintenance, and standard management reporting capabilities. These workshops will include a review and practice for the screens, features, functions, and procedures to be used by the STLTO.	**Anticipated Duration –** 3-4 hours **Number of Sessions –** One (1) for key "go to" personnel; [1-2 for end users] **Attendees –** Appropriate STLTO staff
AutoPROCESS Specialty Training	This training component will be performed as required such as using the Management Dashboard, administrative reviews, hearings, setting up Fleet accounts, Boot/Tow management, permit management, etc. These workshops typically cover a review of appropriate screens and procedures to be used by appropriate STLTO personnel/agencies where applicable. The final number of end user training workshops will be determined based upon the specific operational functions retained by the STLTO.	**Anticipated Duration –** 2-4 hours **Number of Sessions –** 1-2 for key "go to" personnel; [2-3 for end users] **Attendees –** Appropriate STLTO staff

Preliminary Training Plan		
Key Activities	Description/Key Outcomes	Considerations
AutoPROCESS Permit Module Training	Prior to the launch of the online permit module, sessions are held to review all elements of the permit account setup, approval, and fulfillment process. The sessions are typically divided and tailored as they relate to the permit processing steps, such that each functional area within the STLTO receives focused training on the steps of the permit application, approval, purchase, or fulfillment process that are applicable.	**Anticipated Duration –** 2-4 hours **Number of Sessions –** 1-2 for key "go to" personnel **Attendees –** Parking permit management staff
Customer Account Portal Training	Prior to the launch of the Customer Account Portal, designated STLTO personnel will be training on the sites account creation processing, navigation, customer options, and STLTO tools to assist in customer service and STLTO administration of the website.	**Anticipated Duration –** 2-4 hours **Number of Sessions –** One (1) **Attendees –** STLTO selected parking management personnel
AutoPROCESS Boot/ Tow Module Training	To ensure a smooth launch of the revamped boot, tow, and auction application, sessions will be held to review all elements of the vehicle seizure and impoundment process. These sessions are typically divided and tailored to the various operational teams that are involved, including boot crews; impound employees, and vehicle auction staff.	**Anticipated Duration –** 4 hours **Number of Sessions –** Minimum of three (3), additional as required **Attendees –** Vehicle seizure, impound, and auction staff

Documentation

Duncan understands the importance of users having access to the right amount of information at the right time in order to process transactions properly, make the appropriate decisions, and provides superior customer service. As such, Duncan is committed to providing both hardcopy and PDF versions of all user manuals and functional manuals to accommodate all system users and management. These manuals will cover a range of topics from how to interpret data, how to process transactions, how to retrieve reports, etc. Below are some of the high-level topics we will include:

- Intro to AutoPROCESS
- Understanding an Account-Based System
- Inquiry
- Managing Fleets
- Comprehensive Payment Transfers
- Accounts, Registered Owners, and Responsible Parties
- Reviews and Hearings

- Processing Citations and Permits
- Boot/Tow
- Batch Payments in AutoPROCESS
- Payment Plans
- Imports/Exports
- Correspondence
- Cashiering
- Tools and Report Management

Ongoing & Refresher Training

Leading up to and after initial implementation, the Duncan Team will work with STLTO to identify additional training requirements and mutually agree on an appropriate fulfillment strategy and plan. The Duncan Team understands that the long-term nature of our service agreement with STLTO requires periodic refresher training courses due to technology enhancements, policy changes, or employee attrition. As such, Duncan is prepared to provide on-going training in the form of on-site classroom training, general telephone support, or WebEx type training based.

REMOTE DIAGNOSTIC CAPABILITIES

Remote support for processing system end users is accomplished by our Help Desk personnel's use of the LogMeIn remote desktop access application. Our Help Desk, with authorization of STLTO's user, can remotely access the end users computer to assist in the resolution of the user's issue as it relates to Duncan's AutoPROCESS application. Duncan's use of the LogMeIn product means that our users are not left feeling stranded. Users do not have to describe what a screen looks like over the phone or what a cryptic error message says. Unless there is a power or computer outage, our support team will be able to connect remotely to a problem PC and immediately see what the user sees. Our support staff will observe the problem and determine the best course of action. The possible actions may include, but are not limited to, fixing the problem or escalating to a second level resource.

Remote support for handheld devices is also possible using the installed AirWatch device management software, which allows the Duncan Team real-time remote access to devices that require testing, trouble shooting, or upgrades.

PERFORMANCE WITH MINIMUM DOWNTIME

No matter how efficient a system might be, there is always the possibility of a break down in the process resulting from internal or external factors. When process breakdowns occur, it inevitably results in an increase in the time it takes to resolve a customer query. To prevent this, Duncan understands and manages the entire workflow and what role the system plays in it. Duncan is able to identify the crucial aspects of the system, including system behavior during the customer experience life cycle, to lessen the impact of system downtime on customer wait times.

Disaster Recovery Plan

Our Disaster Recovery Plan (DRP) approach provides for two data centers, a primary and a geographically separate secondary. The two data centers operate in an active/active mode. Should a complete loss of the primary data center occur, the disaster recovery plan will include all steps necessary to ensure operation of the secondary data center. This will include verifying network connectivity, confirming database integrity, validating that all systems are online and operational, ensuring that the call center is fully operational, and establishing that all public-facing systems are online. As part of this process, Duncan will maintain a full set of tapes for data archiving and data recovery. Further, an annual plan to test the failover to the secondary data center will be performed, documented and validated for compliance to continuing operation of services.

Recovery from catastrophic failures can be defined as those corrective efforts undertaken at a computer site as the direct result of a natural disaster, fire or flood, which has caused either disruption of services to the user for extended periods or loss of data. The objectives met by the Duncan Disaster Recovery approach include a certain level of system and resource stability during a disaster, minimized downtime and recovery time, reduced risk of permanent loss of core assets, ensured reliability of secondary systems and a platform to simulate various disaster recovery scenarios.

Duncan's comprehensive disaster recovery strategy and supporting plan is designed to follow best practice DRP guidelines and provide staff with a proven action template including appropriate decision gates. As part of this proposal, we have included excerpts from our full service bureau master plan, which describe the multi-step process for a disaster declaration, recovery processes and ongoing testing requirements and approaches. These excerpts serve as an assurance that Duncan is well versed in the development, implementation and execution of a DRP focused on collection services. The Duncan Disaster Recovery Team understands the response procedure is critical to efficiently managing a disaster situation and reducing the impact on business operations.

EQUIPMENT WARRANTY

Duncan has the ability to be maintained by third-party contractors and/or STLTO without affecting the below maintenance guarantees.

Citation Processing Software Maintenance Guarantee

Duncan's systems are available 24 hours per day, seven days per week with the exception of planned and communicated outages for upgrades and system enhancement. Routine maintenance that requires system downtime will typically be scheduled after normal business hours or on weekends, and will be communicated with our local operating staff, Duncan's Service Bureau, and STLTO.

AutoPROCESS is fully hosted by Duncan Solutions, so STLTO can benefit from 99.9% uptime and high system responsiveness without needing to invest in the infrastructure that would be required for a self-hosted solution. As a part of a hosted model, also called System as a Service (SaaS), a system warranty is not applicable. However, Duncan maintains the infrastructure required to support the parking programs of all of our clients, including secure storage of parking violation data.

Duncan will provide the software, services, required integrations, system functionality, maintenance, and support to STLTO, throughout the life of the contract. Duncan also provides a technical support staff that is accessible 24/7, 365 days per year via a toll-free telephone number. The technical support staff is able to handle many inquiries, and additional personnel resources are available to call on should complex situations warrant. In addition to our help desk, STLTO will be able to call on their assigned operations manager for support.

Citation Issuance Software Maintenance Guarantee

With unmatched subject matter expertise in citation issuance solutions as well as management of enforcement operations, Duncan's project management team will continuously evaluate program performance and extend experience-based recommendations for operational and technological improvements. Key members of our management team have substantial expertise in business process re-engineering projects, and our philosophy is to "measure, manage, and improve" performance on a continual basis.

Issue tracking is internal to the Service Center and is readily available to all Service Center, Engineering, and various other support personnel. We will help identify and record any reported problem for control purposes, and will make every attempt to address the problem immediately. In the event that a reported problem cannot be addressed immediately, we will mutually agree on a level of urgency and establish an agreed upon resolution priority. All issues determined to be of a high priority will be brought to the immediate attention of the appropriate support staff for rapid resolution.

FUTURE SOFTWARE UPGRADES

Duncan will maintain and support the AutoPROCESS system software for the life of the contract—including the installation of version upgrades as they become available, at no additional charge. We will also perform backups, provide for disaster recovery, offer trained/certified staff to monitor daily system activity, and troubleshoot and correct system-related problems.

System updates represent bundled changes to a client's existing software version. Duncan will provide STLTO with ongoing software release updates for the contractual components of STLTO's system for the life of the contract **at no additional cost.** Software release updates may include enhancements to existing functionality, additional or modified reports, etc. The release updates are thoroughly tested in our development and Test/Quality Assurance environments before they are installed in production. Our formal release management process ensures that each agency has the most up-to-date release of the application software version for which we are mutually contracted.

Duncan typically issues periodic software release updates to its applications. These updates will be coordinated by Duncan with a STLTO site representative and handled via remote access established during project implementation. Historically, most of the activities associated with a release update are performed remotely by Duncan personnel.

Updates occur on Sundays at 5:00 am ET and maintenance to our systems occurs on Sundays from 1:00 am to 5:00 am ET to prevent disruption to STLTO's program. In the unlikely event that any work needs to be scheduled outside of this maintenance window, Duncan will request approval from the Parking Program Manager at least two (2) weeks in advance.

In the event of an emergency, we reserve the right to perform fixes or security patches. The most typical reason we would need to do this is to protect the safety of STLTO data. Whenever possible, we will not perform emergency database work during normal business hours.

D. Customer Service

Excellent customer service is an important goal for STLTO. For many parking customers, the Parking Violations Bureau is the only point of face-to-face interaction with the City. Duncan, therefore, understands how important it is that this location is manned by qualified, well-trained personnel with the customer service skills and commitment to present a positive image for the City.

Since 1998, we have operated a well-received walk-in customer service program in Milwaukee that is similar in nature to the services proposed for St. Louis. In Milwaukee, Duncan operates three walk-in centers. On a monthly basis, these sites process an average of $400,000 worth of payments.

Additionally, we believe it imperative for the City to consider our ability to efficiently handle large volumes of phone calls. Our telephone system, including our IVR system, is extremely scalable and hundreds more call center representatives can be added to the system if needed. Callers who opt to speak directly with a Customer Service Representative after connecting to our multi-lingual IVR system will have their calls answered quickly and efficiently. In the event of a disaster, our VoIP telephone system allows us to redirect calls to our other offices until our primary call center operations can be restored. It has been our experience that traditional phone systems do not offer the same flexibility.

Duncan has a toll-free customer service line with highly trained and skilled staff available to answer inquiries from 7am – 7pm ET Monday through Friday, and a 24/7 IVR system that provides information for routine inquires. In addition, Our customer service staff will be trained on STLTO specific scripts and business rules to ensure the highest quality customer service is given to STLTO customers and motorists. See additional information under the Interactive Voice Response System.

Though support for pay by mobile issues is broadly requested in the scope of this RFP, we believe that level of detailed support should originate from the pay by cell provider selected by the City, which would most closely align with the meter collections portion of the requested scope. Should the City prefer that this function be handled by Duncan, or would even prefer that Duncan secure its own pay by mobile partner, we would welcome the opportunity to discuss options.

AUTOMATED VOICE RESPONSE SYSTEM

Duncan's IVR system currently handles over a million calls annually. More than 50% of those calls are resolved automatically before requiring Duncan's Customer Service Representative (CSR) intervention, and 95% are answered within 20 seconds. In addition, our IVR system currently processes over 400,000 payments annually. This IVR functionality, combined with our advanced call center staffing methodology, allows Duncan to successfully handle calls with a 98% completion rate. This system has proven versatile and flexible, with the capability to expand infrastructure, as needed – future volumes are virtually limitless.

Our IVR system handles calls without a live attendant, using parameters determined by script files and values determined in accordance with our clients' needs and requirements. The IVR system communicates in real-time with our networked systems through an installed system monitor, updating accounts with information provided by the caller directly into the database without the need for human intervention. With this system, callers can request information by either citation number or license plate number for citation status, amount due, and due date.

IVR Standard Options

Citations can be paid with Visa, MasterCard, Discover, or American Express using this speech system or the Internet. Personal checks or money orders are accepted forms of payment by mail. Do not mail cash. Please refer to the parking citation or notice you received for additional details and payment options. If you would like to make a payment or determine how much you currently owe on a citation using this speech system, simply return to the main menu and follow the prompts to pay a citation. You can look up citations by the citation number or by license plate. If you search by license plate, the system will play back all outstanding parking citations issued to the plate, along with the current amount due for each. Be sure to promptly pay the total amount due to avoid additional fine increases and penalties. Citations that remain unpaid for longer periods will be reported to a collection agency and, under certain conditions, may be reported to the Department of Motor Vehicles, resulting in the suspension of your vehicle registration.

IVR Custom FAQ Options

A variety of additional IVR prompts are available besides the general inquiry, contesting and payment options. With each of the options identified below custom scripts can be professionally recorded and deployed to more efficiently and effective assist the caller.

- **FAQ Not My Vehicle**
  You will need to speak to a customer service representative and provide a copy of your vehicle registration or title to support your claim. Simply providing a general denial of your is not sufficient.
- **FAQ Permit Questions**
- **FAQ Plates Canceled / Stolen or Vehicle Stolen**
  You will need to speak to a customer service representative and provide documentation to support your claim, such as a police report or official notice of plate cancellation. If you reported your vehicle or plates stolen and you don't have a copy of the police report, we recommend that you contact the Police Department where the incident was reported and request one.
- **FAQ Citation Paid**
  Fine amounts automatically increase according to the schedule printed on the citation. If your payment was not received on time, it's possible the fine amount increased and your payment only covered a portion of the amount due, resulting in a balance that you still owe. To determine the current amount owed on a citation, return to the main menu and follow the

prompts to pay a citation. Be sure to promptly pay the total amount owed to avoid additional fine increases and penalties. Under certain conditions, the Department of Motor Vehicles in your State may be notified, resulting in the suspension of your vehicle registration. If you have any questions, please speak to a customer service representative.

- **FAQ Contest Citation with Permit**
  You will need to speak with a customer service representative and contest the citation. A copy of your parking permit will be requested.
- **FAQ Collection Notice**
  You will need to speak with a customer service representative regarding your citations that have been referred to our collections agency.
- **FAQ Contest Handicap Citation**
  You will need to speak with a customer service representative and contest the citation. Copies of your handicapped placard and State-issued identification may be requested as additional proof.
- **FAQ Towed**
  You will need to speak with a customer service representative. If you want me to check if an Agent is available to assist you, can say Agent, or press 0 at the main menu.
- **FAQ Booted**
  You will need to speak with a customer service representative. If you want me to check if an Agent is available to assist you, can say Agent, or press 0 at the main menu
- **FAQ More Menu - Suspended Vehicle Registration**
  For the suspension to be lifted, you must pay all outstanding parking citations. The suspension will be lifted within 7 business days once payment is received. If more than 10 business days have passed since you paid your citations and the suspension is still in effect, please speak with a customer service representative. You can look up citations and determine the amount owed by choosing the pay option from the main menu. If you search for citations issued to a license plate, the system will play back all outstanding parking citations and amounts owed that were issued to the plate.
- **FAQ Intercepted State Tax Refund**
  You will need to speak with a customer service representative.

The most frequent non-English calls received are from Spanish speakers, and Duncan therefore ensures that processes are in place to handle the Spanish-speaking customers' inquiries quickly and efficiently. Our IVR system is coded in English and Spanish and offers a Spanish verbal option to allow a caller to select a Spanish speaking Duncan CSR. When a non-English speaker has been identified, it is noted in the AutoPROCESS system for future reference, and when we receive any further inbound calls from a caller that has previously been identified as non-English speaking, the interactive Intelligence telephone system is programmed to automatically route that call to the Spanish, queue.

Interpretative Services

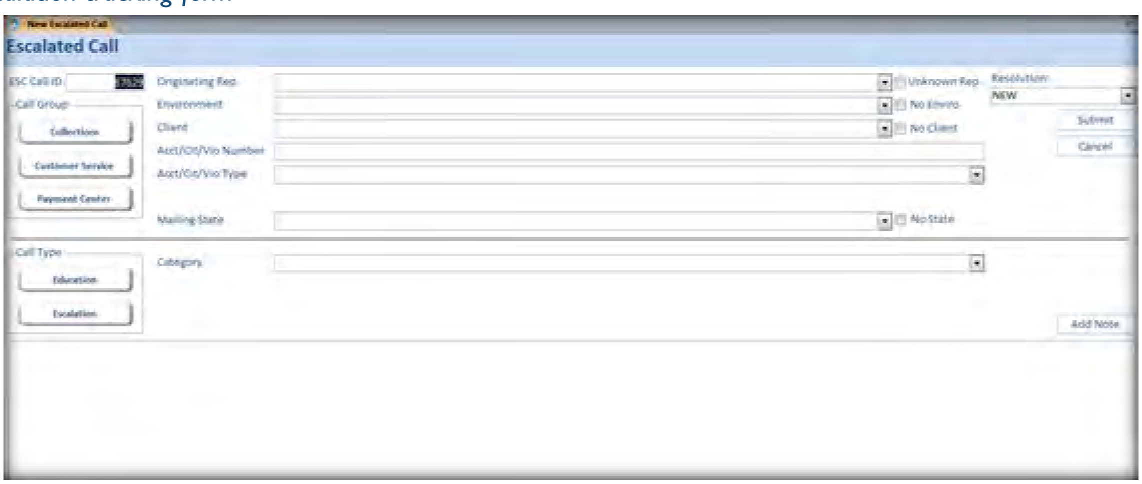
To accommodate speakers of other languages, Duncan contracts with Language Line, a worldwide leader in interpretive services. Through Language Line, we are able to communicate clearly within a matter of seconds with customers speaking more than 170 languages. These services are available during call center hours when our representatives are available to provide assistance.

COMPLAINT LOGGING AND ESCALATION

Duncan values our customers and strives to provide optimal service at all times. We use escalations as a means to understand our service from our customers' perspectives and improve that service going forward. We value the information provided, so place great emphasis on not only collecting the data, but analyzing the data and determine if processes, training, personal performance, or any other issue can be improved to provide better service to our customers.

Duncan employs two methods of capturing this data. Duncan ensures leadership staff is available during all hours of operation to accept live transfers from Customer Service Representatives (CSR) if an escalation is requested, or if the CSR needs help answering a question. The leadership is required to complete a tracking form on our intrashare to log the call on every escalation or education call. This data is automatically collected in a database and analyzed monthly to determine top escalation/education causers and/or if new trends have arisen that need to be addressed. A screenshot of the entry form is below.

Escalation tracking form



Every request for an escalation is handheld live by a member of the Call Center leadership. Leadership completes the form above, which forwards the data analysis to identify top call causers and/or trend identification allowing us to resolve issues impacting our customers.

Additionally, any escalation that meets criteria designed to identify customers that may escalate further to a state or federal regulatory agency or the BBB, or any issue that could result in a compliance violation is required to be escalated to a team external to the operations department for further investigation. Our compliance team completes a thorough review of each of these escalations including reviewing all correspondence sent to the customer and all telephone calls associated with the account. This team is responsible to identify and track to completion any mitigation action necessary to correct any process flaw and/or reach out to the customer regarding unresolved issues.

E. Marketing

When installing any new parking management asset, it is important to engage the public to ensure they not only understand the new technology, but also understand the advantages they will bring to their parking experience. To accomplish this goal, Duncan is proposing a marketing plan that is motorist-centric, ensuring that parkers understand how to interact with the new system and better yet, what new features are available to improve their experience.

Duncan has considerable experience developing unique marketing plans and program outreach materials for our clients' based on individual need. From web-based digital marketing to direct mail, we develop campaigns that ensure maximum reach for STLTO customers. We will work with STLTO to create the materials that effectively educate the public on ease-of-use and how to best use the new parking management system. Duncan will supply all promotional and operation graphics for STLTO.

Duncan understands that we, as the contractor, will be responsible for implementing a marketing campaign to generate traffic and promote the use of the new system to STLTO through notices, flyers, pamphlets, web, and/or other electronic and hard copy materials. Duncan is sensitive to the need for open communications with STLTO's customers and stakeholders, and we will develop a comprehensive marketing plan that meets STLTO's objectives. The initial outreach activities and deliverables will be finalized in close cooperation with STLTO during the transition planning and implementation phase, and may include:

- Public facing website content
- In-statement advertising, such as flyers, included with notices, correspondence, or permit renewal letters
- News releases
- Social media outreach
- Banner ads on payment or parking information website
- Public information meetings
- Mass mailings to the public announcing updates to the program
- Announcements to the City Council
- Public service announcements at significant program milestones

We also use strategically issued press releases as a means of communicating significant events. Additionally, social media has become an increasing important means of messaging. Quick-hitting, real-time alerts will help keep the program front and center. Using features such as Facebook, Twitter and other social media technologies, customers can have easy access and up-to-date information on parking changes and events.

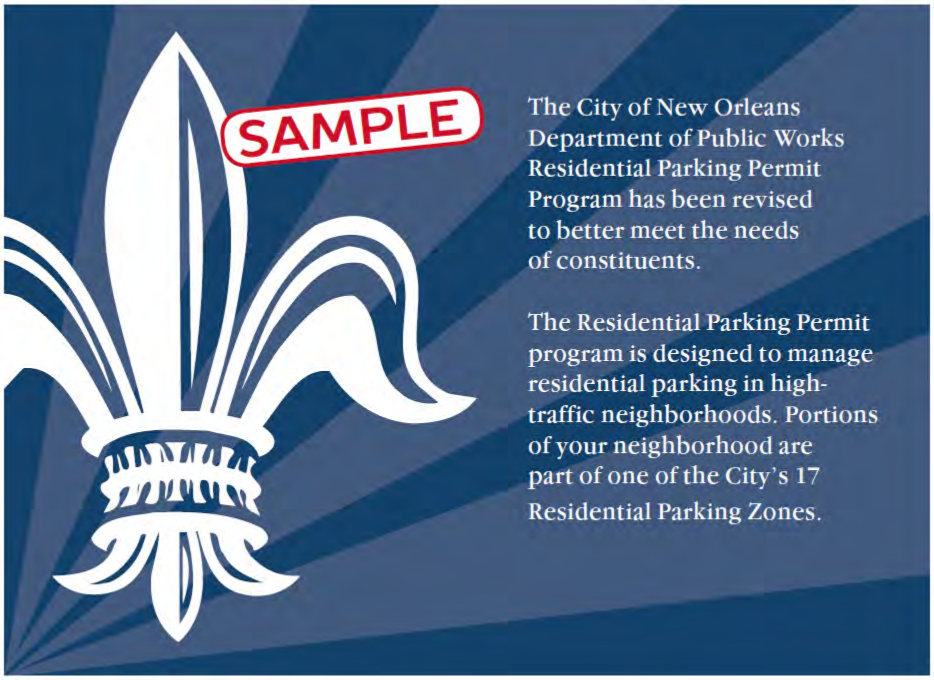
Duncan will coordinate with the multi-space meter and pay-by-cell vendors to create a cohesive campaign that effectively explains all of the relevant elements of the parking program to stakeholders. But most of all, Duncan's commitment to client service is apparent from Duncan's continuous and energetic collaboration with its client in conceiving, developing and implementing enhancements that improve the quality of life for City motorists, residents, visitors, and businesses.

MARKETING PLAN EXAMPLE – NEW ORLEANS

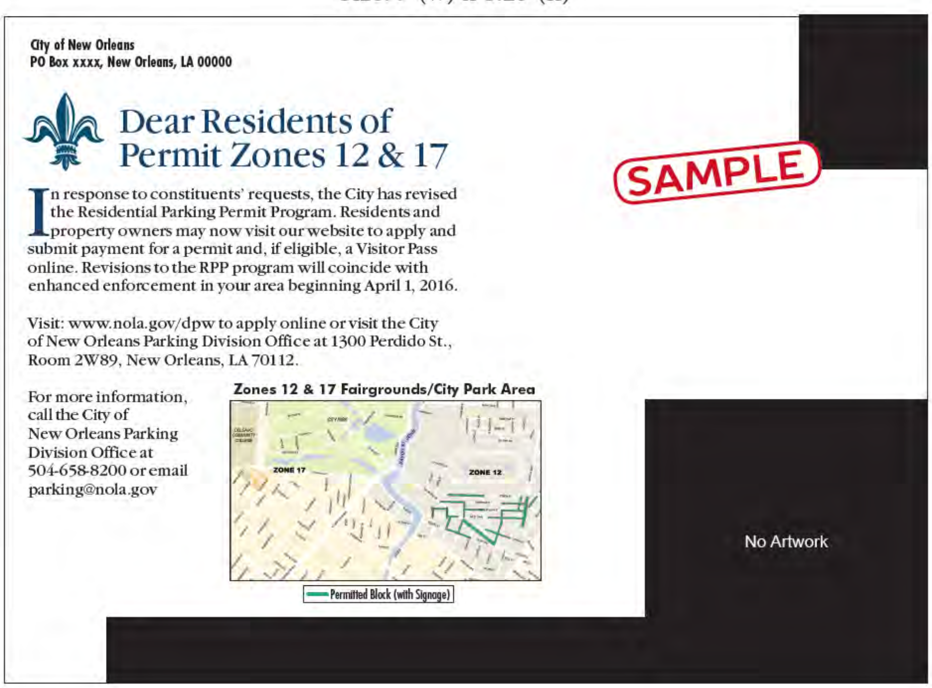
After electing to roll out a new residential parking permit program with Duncan, the city of New Orleans, LA needed a comprehensive marketing strategy that would inform customers of the new, easy-to-use process.

In order to build awareness for the city's new permit program, we created a marketing outreach campaign that involved the direct mailing of postcards along with door hangers. Sample marketing materials follow.

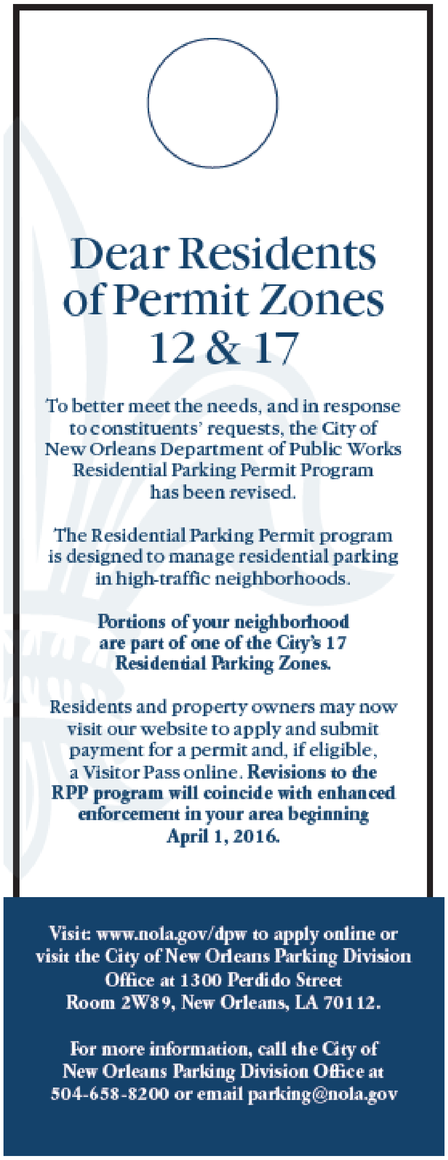
New Orleans postcard - sample



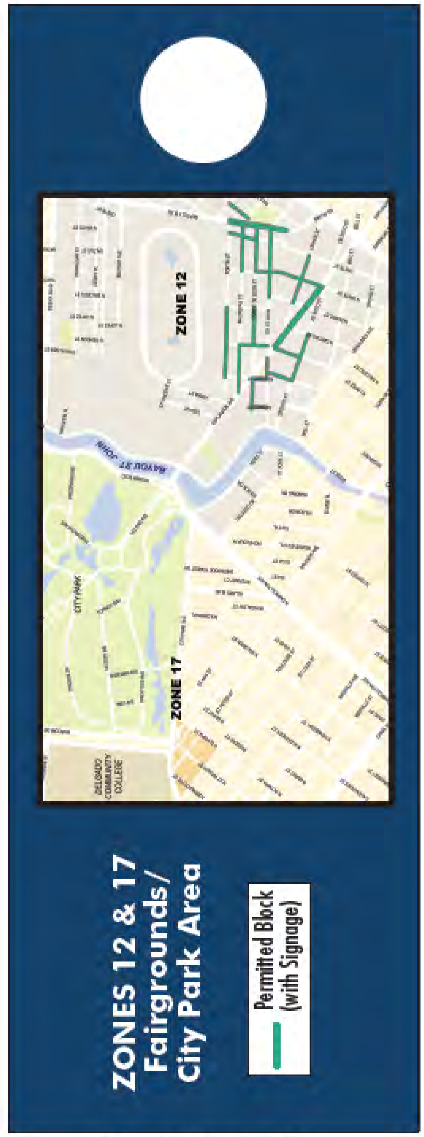
Size: 9 (w) x 6.25 (h)



Door hanger by permit zone



Size: 4 (w) x 11 (h)



Size: 4 (w) x 11 (h)

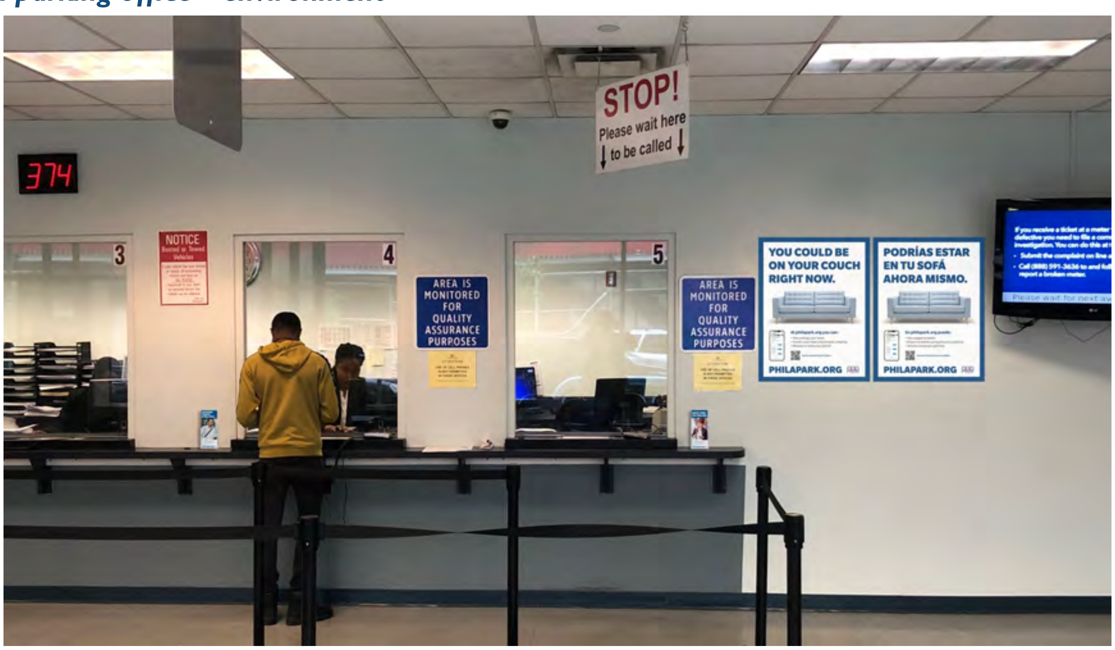
MARKETING PLAN EXAMPLE – PHILADELPHIA

Duncan was recently awarded the citation and permit processing contract for the Philadelphia Parking Authority (PPA), through a multi-staged competitive procurement process. While there were several bid participants, PPA evaluators concluded that only Duncan offered the necessary experience, knowledge base, and resources to meet their needs. Duncan is currently in the process of implementing a marketing outreach plan, similar to the one we propose for STLTO, to ensure customers understand the new system and the new features available to them. Sample marketing material follows.

PPA parking office - posters

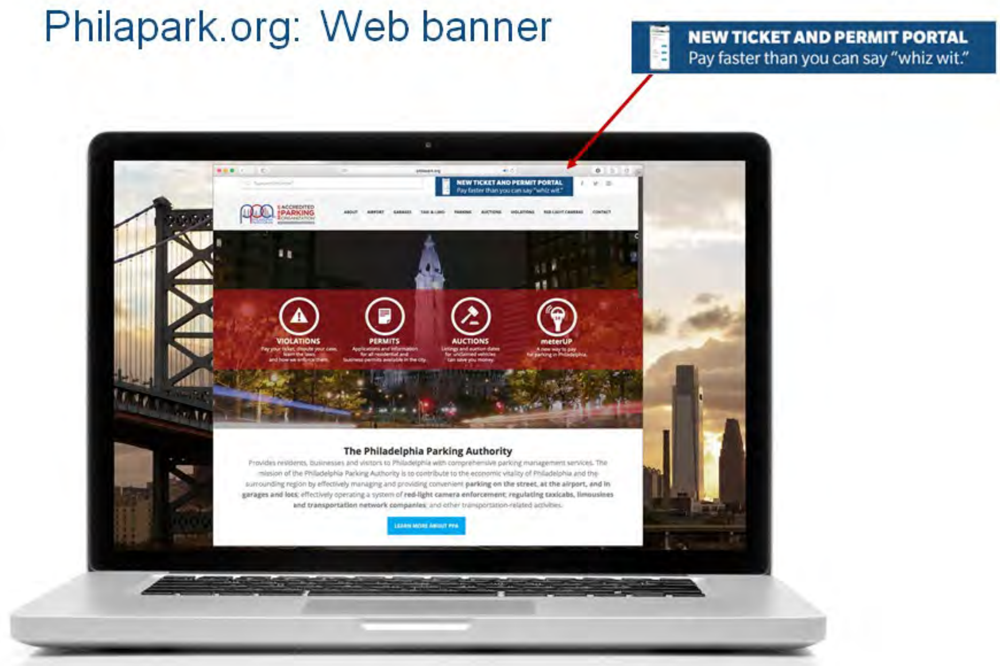
As citizens wait in line to pay, posters remind them that they also can conduct these transactions online. QR codes enable immediate site access.

PPA parking office – environment



Assets are deployed at key points of service, wherever these transactions are most top of mind for citizens.

PPA web banner - sample



Online banner ads are deployed – especially during rollout – to draw attention and traffic to the new, improved portal.

PPA parking office – take one flyers

Handouts are durable reference assets for citizens to keep at home, work, or school.

F. Rollout Implementation Schedule

List installation schedule; development, testing, roll-out, marketing, and training schedules

Duncan's implementation plan has been tested and refined with hundreds of clients across the United States. Our well-established team and implementation process focuses on the details to provide successful program performance and client satisfaction.

Duncan's proposed solution and implementation offers a low risk and custom plan to STLTO operations and revenue. We offer national resources, implementation experience for the most sophisticated parking programs in the U.S., and a rigorous project management approach with a foundation in industry best practices. We have found that planning is the key to successful implementation of any project. As a result, our experienced staff and management team work closely with STLTO in the initiation and planning phases to ensure that the groundwork is laid for a successful, one-time implementation of our processing and collection services.

Over the years, we have developed an implementation methodology that has proven extremely successful. Our implementation plan has been successfully tested with a handful of Conduent clients, one of Duncan's competitors, some of which include; San Diego, CA; Sacramento, CA; Milwaukee, WI, Alexandria, VA, Detroit, MI and New Orleans, LA.

Key features of our proven implementation approach include:

- Assignment of an experienced Program Manager, task oriented Project Managers and dedicated transition leadership team to oversee the process from the first pre-implementation meetings to actual implementation and on to the post-implementation program operations phase. Our project management and leadership team will bring practical and successful experience in proactively supporting STLTO's transition process.
- A proven, well-defined, documented, and flexible transition approach and detailed plan that allows both Duncan and STLTO to monitor the progress of the project and measure key transition milestones along the journey to a successful implementation.
- A time tested "transition in" data conversion and data interface management process which has been successfully used to convert and interface data to/from various systems ranging from simple to significantly complex and a staff of systems professionals who are experts in the complexities of the data conversion, interface and integration process.
- Preparation and validation of solution design and system related documentation to ensure that all equipment, software, features, functions, procedures, manuals, and other components are clearly defined, designed, and mutually agreed upon based on the approved statement of work. In addition, any required user manuals, documentation and the like for ongoing operations will be refined, developed, and delivered as part of the overall transition process.
- Preparation and execution of a comprehensive and rigorous testing strategy and plan to ensure that all features, functions, and procedures components are working as designed and that the system outputs are produced as expected.

- A well-documented and defined performance management and improvement process to ensure compliance with agreed upon service levels for subsequent day-to-day operations. This strategy ensures both Duncan and STLTO are focused on optimizing the overall performance of STLTO's program and that Duncan is well positioned to help achieve the desired services and revenue generating outcomes.
- The development of a detailed training plan to ensure STLTO staff is properly trained in system features and functionality. In addition, any required user manuals, documentation, and the like for ongoing operations will be refined, developed, and delivered as part of the overall transition process.

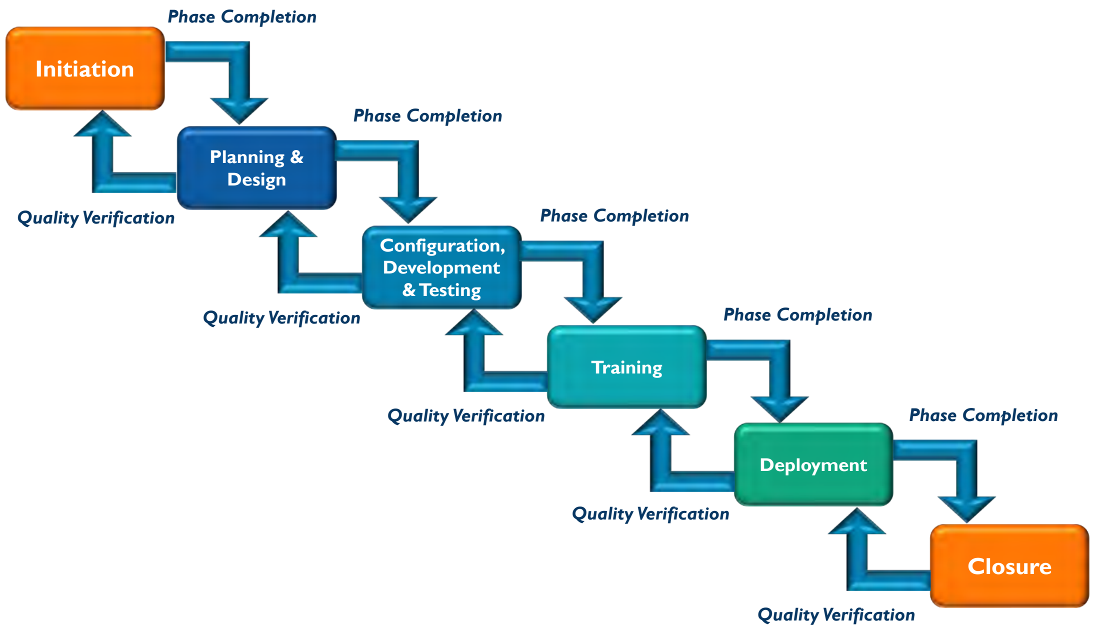
IMPLEMENTATION APPROACH

Duncan's broad multi-level implementation experience coupled with project management best practices will provide STLTO with a timely and successful program transition and implementation. The scope of work requested for system implementation is functionally complex, technology-intensive and operations sensitive. As such, this project requires vendors that have substantial experience in successfully implementing violations solutions; handheld hardware and software solutions; real-time, integrated DMV interfaces; and in-depth knowledge of Missouri business rules and practices. The Duncan team has the required experience to deliver the parking management system solution to STLTO specifications.

A project of this magnitude requires that program management "best practices" and a goal-oriented plan be followed throughout the life of the contract in order to be successful. This means that the selected vendor must have a proven approach to deliver a successful and timely implementation of new hardware, software, and requisite services.

Preparation and execution of a structured testing process and organization readiness assessment to ensure that all features, functions, and procedures are working as designed, that the system outputs are produced as expected and all parties understand their roles and responsibilities for ongoing system operations.

Structured and Proven Implementation Plan



Our proven implementation plan has helped hundreds of clients achieve on time and successful implementation of their parking program.

The core of our implementation methodology is comprised of four key phases. Each is discussed below.

- **Planning & Design** – This phase includes activities such as resource assignment, orientation, as well as detailed planning/refinement. In addition, this includes an onsite or remote meetings plan solution processes, gather and validate specific information such as edit lists, citation design, citation entry data flow deign, design of notice formats, design of correspondence formats, defining processing rules, clarifying event timing, clarifying various processes, defining reporting requirements, etc. STLTO will be expected to actively participate in this process including providing detailed program information, collaboratively providing workflow design, supporting report design, making design decisions, marshaling STLTO resources and approving solution design.

  As STLTO certainly knows, planning is the key to successful implementation of any large complex project. Our experienced staff and management team will work closely with STLTO in the planning phase to ensure that the groundwork is laid for a successful, on-time implementation and a well-designed overall system that will meet STLTO's program goals and objectives.

- **Configuration & Development for Enhancements**—This phase includes obtaining any required hardware/software, configuring system components, crafting notices and correspondence templates, preparing document image work queues, developing any interfaces and required reports, refining the overall transition plan, site preparation, preparing/refining issuance, processing, collection transition procedures, and refining or preparing required user documentation in support of our proposed solution.

- **Training & Testing (STLTO's Test Plan, Training and Documentation Phases)** – this phase includes initial training for Duncan personnel to facilitate unit testing of configured software and procedures specifically architected for STLTO. Initial training will also be provided for key STLTO staff to facilitate system testing which will lead to system acceptance. Additionally, formalized training will be provided for required STLTO end users closer to the planned implementation date. This will help facilitate readiness for day-to-day operations. Duncan will work closely with STLTO to devise a training and testing program that will have the most favorable impact for operational readiness.
    - Testing includes a structured process to validate deliverables in preparation for implementation. This is typically an iterative process involving both STLTO and Duncan personnel for validation of key processes, procedures, system functions and contracted solution deliverables.
    - System Acceptance Testing – System acceptance testing is defined as the testing of features and functions of a complete system, including interfaces, workflow management, overall system flow, etc. to ensure compliance with documented requirements and intended purpose, along with committed features and functionality. This includes end-to-end system functionality including business procedures, online screens, reports, automated processes, interfaces, etc. and will result in formal acceptance for final implementation planning. This process is initially conducted by Duncan staff, then by STLTO staff to accept the delivered solution.
- **Deployment** — as each phase of the enhancements implementation is tested and approved with STLTO, we will work with STLTO to agree on the timing of rolling out the enhancements to the production database. The entire Duncan project team will be in an operations alert status during these mini-implementations to ensure any unforeseen issues are identified and addressed as early as possible.

Finally, our standard methodology also includes an implementation ***Closure*** phase, in which we assess the effectiveness of the implementation process for potential process improvement as well as work with STLTO to define how and when to address items that may have been deferred from the initial implementation process.

CONVERSION APPROACH

Key elements of our data conversion approach are outlined below. It should be noted that this is typically an iterative process and requires close collaboration of client business personnel, client IT personnel as well as Duncan staff.

Conversion Process	
Key Activities	**Description**
Data Source Identification	Identify sources for data. This may be formal files, spreadsheets or other media currently used to support the business process.
Export/Import File Definition	Duncan provides and describes file format required for import to AutoPROCESS system.
Data Mapping & Data Scrubbing	Duncan and client personnel meet to review and discuss special data mapping and data scrubbing considerations to ensure the information is properly transitioned to the AutoPROCESS environment.
Controls Definition	Duncan and our clients review and agree on control parameters that will be used to confirm all records and all data is properly converted to the AutoPROCESS environment.
Data Extract Development & Testing	Clients prepare and test data extract/preparation tools in accordance with the file format agreed upon with Duncan.
Data Import Configuration & Testing	Duncan configures and tests the data import.
Small Sample Extract	Clients prepare a sample data extract with proper controls for test validation.
Small Sample Load	Duncan imports the sample test file.
Small Sample Validation and Process Tuning	Duncan and the client validate and/or tune the sample export/import process based on controls and data validation.
Volume Sample Extract	Client prepares a volume data extract with proper controls for test validation.
Volume Sample Load	Duncan imports the volume test file.
Volume Sample Validation & Process Tuning	Duncan and the client validate and/or tune the volume export/import process based on controls and data validation.
Decision to Implement	Duncan and the client mutually agree to implement the proposed solution.
Freeze Input and Maintenance to Existing Subsystems	Current system activity is frozen. Information is held pending implementation of the proposed solution.
Final Extract	STLTO produces final extract and controls.
Final Load	Duncan processes final import.
Final Validation for Implementation Approval	Duncan and the client validate the final export/import process based on controls and data validation.

As a result of project launch workshops, a detailed data conversion plan is generally prepared in collaboration with our clients as well as any potential third party agencies that may be involved. This data conversion plan will be reviewed and approved by our clients, as it will require direct participation by client personnel. This plan will take into consideration other client related business activities, including priority projects, resource availability, third party availability, etc., when scheduling key tasks, activities, milestones and resource requirements.

TEST ENVIRONMENT

Because our customer's parking programs are constantly evolving, we develop a strict quality assurance process and test environment to support conversions, enhancements and integrations throughout the duration of our relationship. The test environment for AutoPROCESS is the perfect place to test ideas for improving efficiency and add new business rules where the ramifications can be seen without affecting real data.

We will refresh the test environment on a quarterly basis or sooner, if needed. This test system is available at any time, excluding system refreshes, for STLTO to test, verify and approve system modifications before they are released to the production system as to not disturb daily operations.

In addition to the AutoPROCESS test environment, all proposed subsystems, provided by CivicSmart, include a test environment to fulfill the same purpose.

PROJECT IMPLEMENTATION PLAN

Following this page, we have provided a sample project implementation plan created in Microsoft Project. Once the kickoff is complete, Duncan will revise the plan within fifteen (15) business days using inputs and decisions made by STLTO staff and including approach, level of effort, task listing and breakdown structure, major milestones and time to completion. Our plan represents the most complex implementation that we could envision for this project, and as such, we fully expect that this will be refined and simplified during the planning phase.

Detailed Work Plan

Duncan will complete a detailed work plan that lists all tasks and subtasks required for the successful production of each of the major deliverables, including a plan for the disposition or transfer of open/unpaid citations and description of how data will travel from the current system to the proposed system.

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
1	**1**	**ISSUANCE, PROCESSING & PERMIT IMPLEMENTATION PLAN**	**112.13 days**	**Mon 3/11/19**	**Tue 8/13/19**			
2	**1.1**	**PROJECT START-UP**	**22.88 days**	**Mon 3/11/19**	**Wed 4/10/19**			
3	**1.1.1**	**CONTRACT COMPLETION**	**7.4 days**	**Mon 3/11/19**	**Wed 3/20/19**			
4	1.1.1.1	Contract Award	0.1 days	Mon 3/11/19	Mon 3/11/19			DUN-PD,DUN-PM,CITY-PM
5	1.1.1.2	Contract Negotiations	6 days	Mon 3/11/19	Tue 3/19/19	4		DUN-PD,DUN-PM,CITY-PM
6	1.1.1.3	Signed Contract by Duncan	0.3 days	Tue 3/19/19	Tue 3/19/19	5		DUN-MGT
7	1.1.1.4	Signed Contract by Client	0.3 days	Tue 3/19/19	Tue 3/19/19	5		CITY-MGT
8	**1.1.2**	**PRE-PLANNING**	**1 day**	**Thu 3/21/19**	**Thu 3/21/19**			
9	1.1.2.1	Obtain/Review Project Related Materials	0.25 days	Thu 3/21/19	Thu 3/21/19	6		DUN-PM
10	1.1.2.2	Review RFP, Proposal & Agreement	0.5 days	Thu 3/21/19	Thu 3/21/19	9		DUN-PM
11	1.1.2.3	Conduct Initial Start Up Conference Call	0.25 days	Thu 3/21/19	Thu 3/21/19	10		DUN-PM,CITY-PM
12	**1.1.3**	**PLANNING**	**13.88 days**	**Fri 3/22/19**	**Wed 4/10/19**			
13	**1.1.3.1**	**Refine Project Plan**	**6.1 days**	**Fri 3/22/19**	**Mon 4/1/19**			
14	1.1.3.1.1	Review/Revise Activities & Tasks	0.5 days	Fri 3/22/19	Fri 3/22/19	11		DUN-PM
15	1.1.3.1.2	Specify Deliverables & Acceptance Criteria	0.25 days	Fri 3/22/19	Fri 3/22/19	14	Acceptance Criteria	DUN-PM
16	**1.1.3.1.3**	**Confirm Roles & Responsibilities**	**0.5 days**	**Fri 3/22/19**	**Mon 3/25/19**			
17	1.1.3.1.3.1	Internal Resources	0.25 days	Fri 3/22/19	Fri 3/22/19	15		DUN-PM
18	1.1.3.1.3.2	Subcontractor Resources	0.25 days	Mon 3/25/19	Mon 3/25/19	17		DUN-PM
19	1.1.3.1.4	Identify Key Contacts	0.1 days	Mon 4/1/19	Mon 4/1/19	18	Key Contacts	DUN-PM,CITY-PM
20	**1.1.3.2**	**Refine Project Schedule**	**4.13 days**	**Mon 3/25/19**	**Fri 3/29/19**			
21	1.1.3.2.1	Clarify Staffing Plans	0.25 days	Mon 3/25/19	Mon 3/25/19		Preliminary Staffing Plan	DUN-PM
22	1.1.3.2.2	Clarify Development Items	0.25 days	Mon 3/25/19	Mon 3/25/19			DUN-PM,DUN-PD
23	1.1.3.2.3	Refine Dependencies	0.25 days	Mon 3/25/19	Mon 3/25/19			DUN-PM
24	1.1.3.2.4	Refine Milestones	0.1 days	Mon 3/25/19	Mon 3/25/19		Project Milestones	DUN-PM
25	1.1.3.2.5	Update Project Schedule	1 day	Tue 3/26/19	Tue 3/26/19	24	Project Plan/Schedule	DUN-PM
26	1.1.3.2.6	Project Plan Internal Review & Approval	2 days	Wed 3/27/19	Thu 3/28/19	25		DUN-PM
27	1.1.3.2.7	Submit Project Plan to PPA	1 hr	Fri 3/29/19	Fri 3/29/19	26	Project Plan Submittal	DUN-PM
28	**1.1.3.3**	**Refine Risk Management Plan**	**0.75 days**	**Fri 3/29/19**	**Fri 3/29/19**			
29	1.1.3.3.1	Identify Initial Risks	0.25 days	Fri 3/29/19	Fri 3/29/19	27		DUN-PM
30	1.1.3.3.2	Clarify Risk Mitigation Strategies	0.25 days	Fri 3/29/19	Fri 3/29/19	29		DUN-PM
31	1.1.3.3.3	Update Risk Management Plan	0.25 days	Fri 3/29/19	Fri 3/29/19	30	Risk Management Plan	DUN-PM
32	**1.1.3.4**	**Contracts Management**	**8 days**	**Fri 3/29/19**	**Wed 4/10/19**			
33	**1.1.3.4.1**	**Subcontractor(s)/Vendor(s) Management**	**8 days**	**Fri 3/29/19**	**Wed 4/10/19**			
34	**1.1.3.4.1.1**	**CivicSmart Subcontract**	**8 days**	**Fri 3/29/19**	**Wed 4/10/19**			
35	1.1.3.4.1.1.1	Review/Clarify Scope	4 days	Fri 3/29/19	Thu 4/4/19	31		DUN-PM
36	1.1.3.4.1.1.2	Review Teaming Agreement with Partner(s)	4 days	Thu 4/4/19	Wed 4/10/19	35		DUN-PD,DUN-PM,CIVICSM
37	**1.1.3.4.1.2**	**URInternational Subcontract**	**8 days**	**Fri 3/29/19**	**Wed 4/10/19**			
38	1.1.3.4.1.2.1	Review/Clarify Scope	4 days	Fri 3/29/19	Thu 4/4/19	31		DUN-PM
39	1.1.3.4.1.2.2	Review Teaming Agreement with Partner(s)	4 days	Thu 4/4/19	Wed 4/10/19	38		DUN-PM,CIVICSMART
40	**1.1.3.4.1.3**	**Webiplex Subcontract**	**8 days**	**Fri 3/29/19**	**Wed 4/10/19**			
41	1.1.3.4.1.3.1	Review/Clarify Scope	4 days	Fri 3/29/19	Thu 4/4/19	31		DUN-PM
42	1.1.3.4.1.3.2	Review Teaming Agreement with Partner(s)	4 days	Thu 4/4/19	Wed 4/10/19	41		DUN-PM,WEBIPLEX
43	**1.1.3.5**	**Refine Training Schedule**	**1 day**	**Tue 4/2/19**	**Tue 4/2/19**			
44	1.1.3.5.1	Clarify Training Plan	0.5 days	Tue 4/2/19	Tue 4/2/19			DUN-PM
45	1.1.3.5.2	Update Training Schedule	0.5 days	Tue 4/2/19	Tue 4/2/19			DUN-PM
46	1.1.3.5.3	Submit Training Schedule to PPA	1 hr	Tue 4/2/19	Tue 4/2/19			DUN-PM
47	**1.1.3.6**	**Policies & Procedures Management**	**4 days**	**Thu 3/28/19**	**Tue 4/2/19**			
48	1.1.3.6.1	Assemble Baseline Procedures	4 days	Thu 3/28/19	Tue 4/2/19		Baseline Procedures	DUN-PM,DUN-AM
49	1.1.3.6.2	Assemble Baseline Disaster Recovery Plan	4 days	Thu 3/28/19	Tue 4/2/19		Available DRP	DUN-PM,DUN-IT
50	**1.1.3.7**	**Communications Management**	**0.5 days**	**Wed 4/3/19**	**Wed 4/3/19**			
51	**1.1.3.7.1**	**Client Communications**	**0.25 days**	**Wed 4/3/19**	**Wed 4/3/19**			
52	1.1.3.7.1.1	Define Client Communications Methods/Frequency	0.25 days	Wed 4/3/19	Wed 4/3/19			DUN-PM,CITY-PM

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
53	1.1.3.7.1.2	Establish Client Communication Protocol	0.25 days	Wed 4/3/19	Wed 4/3/19			DUN-PM,CITY-PM
54	**1.1.3.7.2**	**Internal Communications**	**0.25 days**	**Wed 4/3/19**	**Wed 4/3/19**			
55	1.1.3.7.2.1	Define Internal Communications Methods/Frequency	0.25 days	Wed 4/3/19	Wed 4/3/19	53		DUN-PM
56	1.1.3.7.2.2	Establish Internal Communication Protocol	0.25 days	Wed 4/3/19	Wed 4/3/19	53	Communication Strategy	DUN-PM
57	**1.1.3.8**	**Facilities Planning**	**0.3 days**	**Wed 4/3/19**	**Wed 4/3/19**			
58	**1.1.3.8.1**	**Determine Infrastructure & Operational Requirements**	**0.3 days**	**Wed 4/3/19**	**Wed 4/3/19**			
59	1.1.3.8.1.1	Communications Lines	0.1 days	Wed 4/3/19	Wed 4/3/19	56		DUN-PM,DUN-IT,CITY-PM
60	1.1.3.8.1.2	Equipment & Supplies Requirements	0.1 days	Wed 4/3/19	Wed 4/3/19	59		DUN-PM,DUN-IT,CITY-PM
61	1.1.3.8.1.3	Hardware Requirements	0.1 days	Wed 4/3/19	Wed 4/3/19	60		DUN-PM,DUN-IT,CITY-PM
62	**1.1.3.9**	**Finalize Project Requirements**	**1.1 days**	**Wed 4/3/19**	**Thu 4/4/19**			
63	**1.1.3.9.1**	**Set up Project Tools**	**0.1 days**	**Wed 4/3/19**	**Wed 4/3/19**			
64	1.1.3.9.1.1	MS Office	0.1 days	Wed 4/3/19	Wed 4/3/19	61		DUN-PM,DUN-IT
65	1.1.3.9.1.2	MS Project	0.1 days	Wed 4/3/19	Wed 4/3/19	61		DUN-PM,DUN-IT
66	1.1.3.9.1.3	SharePoint	0.1 days	Wed 4/3/19	Wed 4/3/19	61		DUN-PM,DUN-IT
67	**1.1.3.9.2**	**Organize Project Resources**	**1 day**	**Wed 4/3/19**	**Thu 4/4/19**			
68	1.1.3.9.2.1	Finalize Staffing Plan	0.25 days	Wed 4/3/19	Thu 4/4/19	66	Final Staffing Plan	DUN-PM,DUN-PD,CITY-PM
69	1.1.3.9.2.2	Finalize Project Resource Acquisitions	0.25 days	Thu 4/4/19	Thu 4/4/19	68		DUN-PM,DUN-PD,CITY-PM
70	1.1.3.9.2.3	Set up Team Performance Standards	0.25 days	Thu 4/4/19	Thu 4/4/19	69	Expectations	DUN-PM
71	1.1.3.9.2.4	Conduct Team Orientation	0.25 days	Thu 4/4/19	Thu 4/4/19	70	Mobilized Project Team	DUN-PM,DUN-AM,DUN-IT
72	1.1.3.10	**Planning Completion**	0 days	Thu 4/4/19	Thu 4/4/19	71		
73	**1.2**	**REQUIREMENTS DESIGN**	**26.1 days**	**Thu 4/4/19**	**Fri 5/10/19**			
74	**1.2.1**	**BANK DEPOSIT DESIGN**	**1.25 days**	**Fri 4/5/19**	**Tue 4/9/19**			
75	1.2.1.1	Define Bank Deposit Requirements	0.25 days	Fri 4/5/19	Mon 4/8/19	71FS+1 day		CITY-ACCT,DUN-PM
76	1.2.1.2	Obtain Signed Bank Letter	1 day	Mon 4/8/19	Tue 4/9/19	75		CITY-ACCT,DUN-PM
77	**1.2.2**	**DATA CONVERSION DESIGN**	**12.25 days**	**Thu 4/18/19**	**Tue 5/7/19**			
78	1.2.2.1	Identify Data Elements and Provide Descriptions of All In-Scope Data to be Converted	1 day	Thu 4/18/19	Fri 4/19/19	71FS+10 days		CITY-PM,CITY-IT,DUN-PM
79	1.2.2.2	Prepare and Publish Conversion Data ICD(s)	2 days	Thu 4/25/19	Mon 4/29/19	71FS+15 days		CITY-PM,CITY-IT,DUN-PM
80	1.2.2.3	Perform Data Mapping	2 days	Tue 4/30/19	Thu 5/2/19	79FS+1 day		DUN-ENG
81	1.2.2.4	Define/Refine Conversion Process	2 days	Thu 5/2/19	Mon 5/6/19	80		DUN-PM,DUN-ENG,CITY-P
82	1.2.2.5	Define Conversion Controls	0.25 days	Mon 5/6/19	Tue 5/7/19	81	Conversion Strategy	DUN-PM,DUN-ENG,CITY-P
83	1.2.3	**Data Conversion Design Completion**	0 days	Tue 5/7/19	Tue 5/7/19	82		
84	**1.2.4**	**HANDHELDS & AutoISSUE - ELECTRONIC CITATION ISSUANCE DESIGN**	**14.6 days**	**Thu 4/4/19**	**Thu 4/25/19**			
85	**1.2.4.1**	**Handheld Issuance Computers**	**3 days**	**Thu 4/4/19**	**Tue 4/9/19**			
86	1.2.4.1.1	Review Statement of Work Requirements	0.25 days	Thu 4/4/19	Fri 4/5/19	72		DUN-PM,CITY-PM,CIVICSM
87	1.2.4.1.2	Finalize Features & Functions	0.25 days	Fri 4/5/19	Fri 4/5/19	86		DUN-PM,CITY-PM,CIVICSM
88	1.2.4.1.3	Finalize Data Flow	0.25 days	Fri 4/5/19	Fri 4/5/19	87		DUN-PM
89	1.2.4.1.4	Finalize Rules (edits & cross edits)	0.5 days	Fri 4/5/19	Mon 4/8/19	88		DUN-PM,CITY-PM
90	1.2.4.1.5	Define Defaults	0.25 days	Mon 4/8/19	Mon 4/8/19	89		DUN-PM,CITY-PM
91	1.2.4.1.6	Define Enterable Data	0.25 days	Mon 4/8/19	Mon 4/8/19	90		DUN-PM,CITY-PM
92	1.2.4.1.7	Define Communication Requirements	0.25 days	Mon 4/8/19	Mon 4/8/19	91		DUN-PM,CITY-PM
93	1.2.4.1.8	Obtain/Finalize List Data (streets, officers, violations, etc.)	1 day	Mon 4/8/19	Tue 4/9/19	92		DUN-PM,CITY-PM
94	**1.2.4.2**	**Handheld Paper**	**1.45 days**	**Tue 4/9/19**	**Thu 4/11/19**			
95	1.2.4.2.1	Finalize Electronic Ticket Requirements	0.1 days	Tue 4/9/19	Tue 4/9/19	93		DUN-PM,CITY-PM
96	1.2.4.2.2	Prepare Electronic Ticket Design	0.25 days	Wed 4/10/19	Wed 4/10/19	95		DUN-PM
97	1.2.4.2.3	Obtain Approval for Electronic Ticket Design	1 day	Wed 4/10/19	Thu 4/11/19	96		CITY-PM,DUN-PM
98	1.2.4.2.4	Order Electronic Ticket Stock	0.1 days	Thu 4/11/19	Thu 4/11/19	97		DUN-PM
99	1.2.4.2.5	Finalize Payment Envelope Requirements	0.1 days	Tue 4/9/19	Tue 4/9/19	93		DUN-PM,CITY-PM
100	1.2.4.2.6	Prepare Payment Envelope Design	0.1 days	Wed 4/10/19	Wed 4/10/19	99		DUN-PM
101	1.2.4.2.7	Obtain Approval for Payment Envelope Design	1 day	Wed 4/10/19	Thu 4/11/19	100		DUN-PM,CITY-PM
102	1.2.4.2.8	Order Payment Envelopes	0.1 days	Thu 4/11/19	Thu 4/11/19	101		DUN-PM
103	**1.2.4.3**	**AutoISSUE Issuance Application**	**0.25 days**	**Thu 4/11/19**	**Thu 4/11/19**			

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
104	1.2.4.3.1	Review Statement of Work Requirements	0.25 days	Thu 4/11/19	Thu 4/11/19	101		DUN-PM,CITY-PM,CIVICSM
105	1.2.4.3.2	Finalize Features & Functions	0.25 days	Thu 4/11/19	Thu 4/11/19	101		DUN-PM,CITY-PM
106	**1.2.4.4**	**PEMS Application**	**1 day**	**Thu 4/11/19**	**Fri 4/12/19**			
107	1.2.4.4.1	Define/Refine PEMS Enforcement Requirements	0.5 days	Thu 4/11/19	Thu 4/11/19	101		DUN-PM,CITY-PM,CIVICSM
108	1.2.4.4.2	Define Refine On-Street Asset Management Requirements	0.5 days	Thu 4/11/19	Fri 4/12/19	107		CITY-PM,CIVICSMART,DUN
109	1.2.4.4.3	Finalize Features & Functions	0.5 days	Thu 4/11/19	Fri 4/12/19	107		DUN-PM,CITY-PM
110	**1.2.4.5**	**Finalize Interface/Integration**	**1.35 days**	**Thu 4/11/19**	**Fri 4/12/19**			
111	1.2.4.5.1	Citation Data Transfer (batch & wireless)	0.1 days	Thu 4/11/19	Thu 4/11/19	105		DUN-PM,CIVICSMART,CITY
112	1.2.4.5.2	Scofflaws & Other Lists (batch & wireless)	0.1 days	Thu 4/11/19	Thu 4/11/19	111		DUN-PM,CIVICSMART,CITY
113	1.2.4.5.3	Stolen Vehicle List	0.1 days	Thu 4/11/19	Thu 4/11/19	111		DUN-PM,CIVICSMART,CITY
114	1.2.4.5.4	Real-time Permit Validation Check	1 day	Thu 4/11/19	Fri 4/12/19	111		DUN-PM,CIVICSMART,CITY
115	1.2.4.5.5	LPR Interface	0.25 days	Thu 4/11/19	Thu 4/11/19	111		DUN-PM,CITY-SUP,CIVICSN
116	1.2.4.5.6	Interface/Integration Approval	1 day	Thu 4/11/19	Fri 4/12/19	115		DUN-PM,CITY-PM,SUBC,CI
117	**1.2.4.6**	**Reporting**	**0.35 days**	**Thu 4/11/19**	**Thu 4/11/19**			
118	1.2.4.6.1	Identify Required Reports	0.25 days	Thu 4/11/19	Thu 4/11/19	105		DUN-PM,CITY-PM
119	1.2.4.6.2	Review Available Reports	0.1 days	Thu 4/11/19	Thu 4/11/19	105		DUN-PM,CITY-PM
120	1.2.4.6.3	Define/Design Additional Reports	0.25 days	Thu 4/11/19	Thu 4/11/19	119		DUN-PM,CITY-PM
121	**1.2.4.7**	**Security**	**0.35 days**	**Thu 4/11/19**	**Fri 4/12/19**			
122	1.2.4.7.1	Identify Handheld Users (enforcement officers, supervisors, etc.)	0.1 days	Thu 4/11/19	Thu 4/11/19	120		CIVICSMART,CITY-SUP,DUI
123	1.2.4.7.2	Identify System Users & Capabilities	0.1 days	Thu 4/11/19	Thu 4/11/19	122		CIVICSMART,CITY-SUP,DUI
124	1.2.4.7.3	Define/Design Security Profiles	0.25 days	Thu 4/11/19	Fri 4/12/19	122		CIVICSMART
125	**1.2.4.8**	**Finalize Infrastructure Requirements**	**0.85 days**	**Fri 4/12/19**	**Fri 4/12/19**			
126	1.2.4.8.1	Determine Handheld Deployment Plan (handhelds per location)	0.1 days	Fri 4/12/19	Fri 4/12/19	124		CITY-PM,DUN-PM
127	1.2.4.8.2	Finalize Charger/Communication Requirements	0.1 days	Fri 4/12/19	Fri 4/12/19	126		DUN-PM,CIVICSMART
128	1.2.4.8.3	Finalize Desktop HW/SW Requirements	0.25 days	Fri 4/12/19	Fri 4/12/19	126		DUN-PM,CITY-PM,CIVICSM
129	1.2.4.8.4	Finalize Desktop HW Physical Location Requirements	0.25 days	Fri 4/12/19	Fri 4/12/19	128		DUN-IT,CITY-PM,CIVICSMA
130	1.2.4.8.5	Finalize Location Connectivity & IT Support Requirements	0.25 days	Fri 4/12/19	Fri 4/12/19	129		DUN-IT,CITY-PM,CITY-IT
131	**1.2.4.9**	**Electronic Citation Data Interface**	**0.1 days**	**Fri 4/12/19**	**Fri 4/12/19**			
132	1.2.4.9.1	Define Data Upload Process & Controls	0.1 days	Fri 4/12/19	Fri 4/12/19	130		DUN-PM,CIVICSMART
133	1.2.4.9.2	Define Data Download Process & Controls	0.1 days	Fri 4/12/19	Fri 4/12/19	130		CIVICSMART,DUN-IT
134	**1.2.4.10**	**Procurement of Hardware & Software**	**9.1 days**	**Fri 4/12/19**	**Thu 4/25/19**			
135	**1.2.4.10.1**	**Order Placement**	**0.25 days**	**Fri 4/12/19**	**Fri 4/12/19**			
136	1.2.4.10.1.1	Prepare/Submit Purchase Order for HW/SW	0.25 days	Fri 4/12/19	Fri 4/12/19	128		DUN-PM,DUN-IT
137	**1.2.4.10.2**	**Material Receipt & Inspection**	**0.5 days**	**Tue 4/23/19**	**Wed 4/24/19**			
138	1.2.4.10.2.1	Receive/Inspect HW/SW	0.5 days	Tue 4/23/19	Wed 4/24/19	136FS+7 days		DUN-IT,DUN-PM
139	**1.2.4.10.3**	**Shipping**	**1.35 days**	**Wed 4/24/19**	**Thu 4/25/19**			
140	1.2.4.10.3.1	Repackage Materials	0.25 days	Wed 4/24/19	Wed 4/24/19	138		DUN-IT
141	1.2.4.10.3.2	Ship Materials to Client Location(s)	0.1 days	Thu 4/25/19	Thu 4/25/19	140FS+1 day		DUN-IT
142	1.2.4.11	**Electronic Citation Issuance Design Completion**	0 days	Thu 4/25/19	Thu 4/25/19	141		
143	**1.2.5**	**CITATION AND PERMIT PROCESSING DESIGN**	**22 days**	**Thu 4/11/19**	**Fri 5/10/19**			
144	**1.2.5.1**	**Manual Citation Data Entry**	**3 days**	**Tue 4/16/19**	**Thu 4/18/19**			
145	1.2.5.1.1	Define/Refine Data Entry Guidelines & Process	0.25 days	Tue 4/16/19	Tue 4/16/19			DUN-PM,PRWT,CITY-PM
146	1.2.5.1.2	Define/Refine Data Scanning Process	0.25 days	Tue 4/16/19	Tue 4/16/19			DUN-PM,PRWT
147	1.2.5.1.3	Define Document Retention Requirements	0.1 days	Tue 4/16/19	Tue 4/16/19	145		DUN-PM,PRWT
148	1.2.5.1.4	Define Manual Citation Workflow Actions, Process & Controls	2 days	Tue 4/16/19	Thu 4/18/19	145		DUN-PM,PRWT
149	**1.2.5.2**	**Define Booting Support Considerations**						
150	1.2.5.2.1	Provide Booting Requirements and Business Rules	0.5 days	Thu 4/11/19	Thu 4/11/19	72		CITY-PM
151	1.2.5.2.2	Review Rules & Considerations	1 day	Thu 4/11/19	Fri 4/12/19	150		DUN-PM,CITY-PM
152	1.2.5.2.3	Define Equipment/Integration Considerations	0.5 days	Fri 4/12/19	Fri 4/12/19	151		DUN-PM,CITY-PM
153	1.2.5.2.4	Define/Design Process	1 day	Mon 4/15/19	Mon 4/15/19	152		DUN-PM,CITY-PM
154	1.2.5.2.5	Define Roles & Responsibilities	0.25 days	Tue 4/16/19	Tue 4/16/19	153		DUN-PM,CITY-PM
155	1.2.5.2.6	Define/Design Reporting Requirements	1 day	Tue 4/16/19	Wed 4/17/19	154		DUN-PM,CITY-PM

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
156	**1.2.5.3**	**Define Towing Support Considerations**	**8.25 days**	**Thu 4/11/19**	**Tue 4/23/19**			
157	1.2.5.3.1	Provide Towing Requirements and Business Rules	0.5 days	Thu 4/11/19	Thu 4/11/19	72		CITY-PM,DUN-PM
158	1.2.5.3.2	Review Rules & Considerations	1 day	Wed 4/17/19	Thu 4/18/19	155,157		DUN-PM,CITY-PM
159	1.2.5.3.3	Define Service Provider(s) Considerations	1 day	Thu 4/18/19	Fri 4/19/19	158		DUN-PM,CITY-PM,UR INTL
160	1.2.5.3.4	Define/Design Process	2 days	Thu 4/18/19	Mon 4/22/19	158		DUN-PM,CITY-PM,UR INTL
161	1.2.5.3.5	Define Roles & Responsibilities	0.25 days	Mon 4/22/19	Mon 4/22/19	160		DUN-PM,CITY-PM
162	1.2.5.3.6	Define/Design Reporting Requirements	1 day	Mon 4/22/19	Tue 4/23/19	160		DUN-PM,CITY-PM,UR INTL
163	**1.2.5.4**	**Red Light/Speed Violation Interface**	**0.5 days**	**Thu 4/18/19**	**Thu 4/18/19**			
164	1.2.5.4.1	Define Red Light/Speed Interface Requirements and Business Rules	0.5 days	Thu 4/18/19	Thu 4/18/19	148		CITY-PM,DUN-PM
165	1.2.5.4.2	Define Red Light/Speed Interface File Formats and Timing	0.5 days	Thu 4/18/19	Thu 4/18/19	148		CITY-PM,DUN-PM
166	**1.2.5.5**	**Residential Parking Permits**	**2.95 days**	**Tue 4/23/19**	**Fri 4/26/19**			
167	1.2.5.5.1	Define Permit Types	0.25 days	Tue 4/23/19	Tue 4/23/19	162		DUN-PM,CITY-PM
168	1.2.5.5.2	Define Permit Fees	0.1 days	Tue 4/23/19	Tue 4/23/19	167		DUN-PM,CITY-PM
169	1.2.5.5.3	Define Permit Content, Format & Provisioning Responsibility	0.25 days	Tue 4/23/19	Tue 4/23/19	168		DUN-PM
170	**1.2.5.5.4**	**Define Application Process & Rules**	**0.6 days**	**Tue 4/23/19**	**Wed 4/24/19**			
171	1.2.5.5.4.1	Define Selling Rules	0.1 days	Tue 4/23/19	Tue 4/23/19	169		DUN-PM,CITY-SUP
172	1.2.5.5.4.2	Define Application Process (batch, online)	0.25 days	Tue 4/23/19	Wed 4/24/19	171		DUN-PM,CITY-SUP
173	1.2.5.5.4.3	Define Renewal Process & Rules	0.25 days	Wed 4/24/19	Wed 4/24/19	172		DUN-PM,CITY-SUP
174	1.2.5.5.5	Define Document Retention Guidelines	0.1 days	Wed 4/24/19	Wed 4/24/19	173		DUN-PM,CITY-SUP
175	1.2.5.5.6	Design Permit Website	2 days	Wed 4/24/19	Fri 4/26/19	172		CITY-PM,DUN-ENG,DUN-P
176	**1.2.5.6**	**DMV Interface**	**2.45 days**	**Thu 4/18/19**	**Mon 4/22/19**			
177	**1.2.5.6.1**	**Registered Owner Information Acquisition**	**0.5 days**	**Thu 4/18/19**	**Thu 4/18/19**			
178	1.2.5.6.1.1	Define/Refine Batch Process, Timing & Format for Request	0.1 days	Thu 4/18/19	Thu 4/18/19	148		DUN-PM
179	1.2.5.6.1.2	Define/Refine Batch Process, Timing & Format for Response	0.1 days	Thu 4/18/19	Thu 4/18/19	148		DUN-DMV
180	1.2.5.6.1.3	Define/Refine Nlets Requirements	0.25 days	Thu 4/18/19	Thu 4/18/19	148		CITY-PM,DUN-DMV,DUN-P
181	1.2.5.6.1.4	Define/Refine Pennsylvania Real-Time Request Requirements	0.5 days	Thu 4/18/19	Thu 4/18/19	148		CITY-PM,DUN-DMV,DUN-P
182	1.2.5.6.1.5	Obtain Authorization to Represent Client for RO Data	0.1 days	Thu 4/18/19	Thu 4/18/19	180		DUN-DMV
183	1.2.5.6.1.6	Submit Authorization to Represent Client for RO Data	0.1 days	Thu 4/18/19	Thu 4/18/19	182		DUN-DMV
184	**1.2.5.6.2**	**Registration Hold and Release Management**	**1.5 days**	**Thu 4/18/19**	**Mon 4/22/19**			
185	1.2.5.6.2.1	Define/Refine Hold Placement Request Process	1 day	Thu 4/18/19	Fri 4/19/19	183		DUN-ANL,CITY-PM,DUN-PI
186	1.2.5.6.2.2	Define/Refine Hold Release Process	0.25 days	Fri 4/19/19	Fri 4/19/19	185		DUN-ANL,CITY-PM,DUN-PI
187	1.2.5.6.2.3	Define Reporting Requirements	0.25 days	Fri 4/19/19	Mon 4/22/19	186		DUN-PM,CITY-PM
188	1.2.5.6.3	Define National Crime Information Center Interface	0.5 days	Mon 4/22/19	Mon 4/22/19	187		DUN-PM,CITY-PM
189	**1.2.5.7**	**Notice Generation**	**1.05 days**	**Mon 4/22/19**	**Tue 4/23/19**			
190	1.2.5.7.1	Provide Notice Requirements and Samples of Current Notices	0.25 days	Mon 4/22/19	Mon 4/22/19	187		CITY-PM,PRWT
191	1.2.5.7.2	Review SOW Notice Requirements	0.1 days	Mon 4/22/19	Mon 4/22/19	190		DUN-AM,DUN-PM,PRWT
192	1.2.5.7.3	Define/Design Required Notices	0.5 days	Mon 4/22/19	Tue 4/23/19	191		DUN-PM,DUN-AM,PRWT
193	1.2.5.7.4	Obtain Initial Notice Design Approval	0.1 days	Tue 4/23/19	Tue 4/23/19	192		DUN-PM,CITY-PM,PRWT
194	1.2.5.7.5	Define Notice Generation Cycle and Process	0.1 days	Tue 4/23/19	Tue 4/23/19	193		DUN-AM,CITY-PM,PRWT
195	**1.2.5.8**	**Payment Processing**	**2.05 days**	**Tue 4/23/19**	**Thu 4/25/19**			
196	1.2.5.8.1	Define Mail/Lockbox Processing	0.25 days	Tue 4/23/19	Tue 4/23/19	194		DUN-PM,DUN-AM,PRWT
197	1.2.5.8.2	Define Web Payment Process	0.1 days	Tue 4/23/19	Tue 4/23/19	196		DUN-PM,DUN-AM
198	1.2.5.8.3	Design Payment Website	1 day	Tue 4/23/19	Wed 4/24/19	197		DUN-PM,CITY-PM
199	1.2.5.8.4	Define IVR Payment Process	0.5 days	Wed 4/24/19	Thu 4/25/19	198		CITY-PM,DUN-PM,PRWT,D
200	1.2.5.8.5	Define Credit/Debit Card Processing	0.1 days	Thu 4/25/19	Thu 4/25/19	199		DUN-AM
201	1.2.5.8.6	Confirm Credit/Debit Card Gateway & Processor	0.1 days	Thu 4/25/19	Thu 4/25/19	200		DUN-PM,DUN-AM
202	**1.2.5.9**	**Optional Payment Considerations**	**0.75 days**	**Thu 4/25/19**	**Fri 4/26/19**			
203	1.2.5.9.1	Define/Refine Cashiering Process & Equipment	0.25 days	Thu 4/25/19	Thu 4/25/19	201		DUN-PM,CITY-PM,CITY-AC
204	1.2.5.9.2	Prepare/Submit Purchase Order for Cashiering Equipment	0.25 days	Thu 4/25/19	Thu 4/25/19	203		DUN-PM,DUN-IT
205	1.2.5.9.3	Define Other Payment Interfaces (Installment Payment Plans, etc.)	0.25 days	Thu 4/25/19	Fri 4/26/19	204		DUN-PM,CITY-PM
206	**1.2.5.10**	**Correspondence (Inbound & Outbound)**	**4.3 days**	**Mon 4/22/19**	**Fri 4/26/19**			

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
207	1.2.5.10.1	Provide Correspondence Requirements and Samples of Current Letters	0.25 days	Mon 4/22/19	Mon 4/22/19	187		CITY-PM
208	1.2.5.10.2	Review SOW Correspondence Requirements	0.25 days	Mon 4/22/19	Mon 4/22/19	207		DUN-PM,DUN-AM
209	**1.2.5.10.3**	**Outbound Correspondence**	**2.4 days**	**Mon 4/22/19**	**Thu 4/25/19**	**208**		
210	1.2.5.10.3.1	Review Available Outbound Correspondence Inventory	0.1 days	Mon 4/22/19	Mon 4/22/19			DUN-AM
211	1.2.5.10.3.2	Tailor Existing Outbound Correspondence	0.25 days	Mon 4/22/19	Tue 4/23/19	210		DUN-AM
212	1.2.5.10.3.3	Develop New Outbound Correspondence	0.5 days	Tue 4/23/19	Tue 4/23/19	207,211		DUN-AM,DUN-ANL
213	1.2.5.10.3.4	Confirm Initial Correspondence Design	0.1 days	Tue 4/23/19	Tue 4/23/19	212		DUN-AM,DUN-ANL,CITY-P
214	1.2.5.10.3.5	Define Automated Correspondence Generation Rules	0.1 days	Tue 4/23/19	Tue 4/23/19	213		DUN-AM,CITY-PM
215	1.2.5.10.3.6	Define Document Retention Requirements	0.1 days	Tue 4/23/19	Tue 4/23/19	213		DUN-AM,CITY-PM
216	1.2.5.10.3.7	Prepare Sample Correspondence for Approval	0.1 days	Wed 4/24/19	Wed 4/24/19	215		DUN-ANL,DUN-AM
217	1.2.5.10.3.8	Obtain Correspondence Format Approval	1 day	Wed 4/24/19	Thu 4/25/19	216		DUN-PM,CITY-PM
218	**1.2.5.10.4**	**Inbound Correspondence**	**1.5 days**	**Thu 4/25/19**	**Fri 4/26/19**			
219	1.2.5.10.4.1	Define Inbound Correspondence Workflow Actions, Process & Controls	0.25 days	Thu 4/25/19	Thu 4/25/19			DUN-AM,CITY-PM,DUN-PN
220	1.2.5.10.4.2	Define Inbound Correspondence Scanning Requirements	0.1 days	Thu 4/25/19	Thu 4/25/19	219		DUN-AM,PRWT,DUN-PM
221	1.2.5.10.4.3	Define Document Retention Requirements	0.1 days	Thu 4/25/19	Thu 4/25/19	219		DUN-AM,CITY-PM,DUN-PN
222	1.2.5.10.4.4	Design DocuPeak Correspondence Workflow Solution	0.5 days	Fri 4/26/19	Fri 4/26/19	221		DUN-PM,DUN-AM,DUN-AI
223	**1.2.5.11**	**Define Adjudication Support Considerations**	**2.6 days**	**Fri 4/26/19**	**Wed 5/1/19**			
224	1.2.5.11.1	Define Online Request Process	0.5 days	Fri 4/26/19	Fri 4/26/19	222		DUN-AM,CITY-PM
225	1.2.5.11.2	Define Court/Reviewer Name, et al	0.25 days	Mon 4/29/19	Mon 4/29/19	224		DUN-AM,CITY-PM
226	1.2.5.11.3	Define Rules (officer present, language options, etc.)	0.25 days	Mon 4/29/19	Mon 4/29/19	224		DUN-AM,CITY-PM
227	1.2.5.11.4	Define Schedule (as applicable-hearings per period)	0.1 days	Mon 4/29/19	Mon 4/29/19	224		DUN-AM,CITY-PM
228	1.2.5.11.5	Define Dispositions	0.1 days	Mon 4/29/19	Mon 4/29/19	224		DUN-AM,CITY-PM
229	1.2.5.11.6	Define Disposition Posting Responsibilities	0.1 days	Mon 4/29/19	Mon 4/29/19	228		DUN-AM,CITY-PM
230	1.2.5.11.7	Design Adjudication Website	2 days	Mon 4/29/19	Wed 5/1/19	224,228		DUN-PM,CITY-PM,DUN-EN
231	**1.2.5.12**	**Define Special Enforcement List Management**	**0.9 days**	**Wed 5/1/19**	**Wed 5/1/19**			
232	1.2.5.12.1	Define/Prepare Exempt List & Management Process	0.1 days	Wed 5/1/19	Wed 5/1/19	230		
233	1.2.5.12.2	Confirm Hot Sheet Eligibility Rules	0.1 days	Wed 5/1/19	Wed 5/1/19	232		DUN-PM,CITY-SUP
234	1.2.5.12.3	Define/Prepare Permit Cross Reference List & Management Process	0.1 days	Wed 5/1/19	Wed 5/1/19	233		DUN-PM,CITY-SUP
235	1.2.5.12.4	Define/Prepare Meter Location Matrix & Management Process	0.1 days	Wed 5/1/19	Wed 5/1/19	234		DUN-PM,CITY-SUP
236	1.2.5.12.5	Define/Prepare Stolen Vehicle List & Management Process	0.5 days	Wed 5/1/19	Wed 5/1/19	235		DUN-PM,CITY-SUP
237	**1.2.5.13**	**Additional Considerations**	**0.5 days**	**Thu 5/2/19**	**Thu 5/2/19**			
238	1.2.5.13.1	Define/Refine Overpayment Management	0.1 days	Thu 5/2/19	Thu 5/2/19	236		DUN-AM,CITY-ACCT
239	1.2.5.13.2	Define/Refine Refund Management	0.1 days	Thu 5/2/19	Thu 5/2/19	238		DUN-AM,CITY-ACCT
240	1.2.5.13.3	Define/Refine NSF Management	0.1 days	Thu 5/2/19	Thu 5/2/19	239		DUN-AM,CITY-ACCT
241	1.2.5.13.4	Define Reconciliation & Financial Reporting	0.1 days	Thu 5/2/19	Thu 5/2/19	74,240		DUN-AM,CITY-ACCT
242	1.2.5.13.5	Define Fleet, Lease/Rental Management	0.1 days	Thu 5/2/19	Thu 5/2/19	241		CITY-ACCT,DUN-AM
243	**1.2.5.14**	**Collections Interface**	**0.5 days**	**Thu 5/2/19**	**Thu 5/2/19**			
244	1.2.5.14.1	Provide Collections Interface Requirements and Rules	0.25 days	Thu 5/2/19	Thu 5/2/19	242		CITY-PM,DUN-PM
245	1.2.5.14.2	Define Inbound and Outbound Collections File Requirements	0.25 days	Thu 5/2/19	Thu 5/2/19	244		CITY-PM,DUN-PM
246	**1.2.5.15**	**Customer Account Portal**	**1.5 days**	**Tue 5/7/19**	**Thu 5/9/19**			
247	1.2.5.15.1	Define Customer Account Portal Requirements	0.5 days	Tue 5/7/19	Wed 5/8/19	230		CITY-PM,DUN-PM
248	1.2.5.15.2	Design Customer Account Portal Website	1 day	Wed 5/8/19	Thu 5/9/19	247		CITY-PM,DUN-ENG,DUN-P
249	**1.2.5.16**	**Management Reporting**	**1 day**	**Fri 5/3/19**	**Fri 5/3/19**			
250	**1.2.5.16.1**	**Standard Reporting**	**1 day**	**Fri 5/3/19**	**Fri 5/3/19**			
251	1.2.5.16.1.1	Define Monthly, Quarterly & Annual Reporting Requirements	1 day	Fri 5/3/19	Fri 5/3/19	245		DUN-PM,CITY-PM
252	1.2.5.16.1.2	Define Distribution/Access Requirements	0.25 days	Fri 5/3/19	Fri 5/3/19	245		DUN-PM,CITY-PM
253	**1.2.5.16.2**	**Ad Hoc Reporting**	**0.5 days**	**Fri 5/3/19**	**Fri 5/3/19**			
254	1.2.5.16.2.1	Define Ad Hoc Reporting Requirements	0.5 days	Fri 5/3/19	Fri 5/3/19	252		DUN-PM,CITY-PM
255	1.2.5.16.2.2	Define Roles & Responsibilities	0.1 days	Fri 5/3/19	Fri 5/3/19	252		DUN-PM,CITY-PM
256	**1.2.5.16.3**	**Management Dashboard**	**0.25 days**	**Fri 5/3/19**	**Fri 5/3/19**			

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
257	1.2.5.16.3.1	Define Management Dashboard Considerations	0.25 days	Fri 5/3/19	Fri 5/3/19	255		DUN-PM,CITY-PM
258	**1.2.5.16.4**	**Audit Support**	**0.25 days**	**Fri 5/3/19**	**Fri 5/3/19**			
259	1.2.5.16.4.1	Define Audit Support Considerations	0.25 days	Fri 5/3/19	Fri 5/3/19	257		DUN-PM,CITY-PM
260	**1.2.5.17**	**Processing System Management & Administration**	**2.4 days**	**Fri 5/3/19**	**Wed 5/8/19**			
261	**1.2.5.17.1**	**System Configuration**	**2.4 days**	**Fri 5/3/19**	**Wed 5/8/19**			
262	**1.2.5.17.1.1**	**Obtain Required System Lists**	**0.5 days**	**Fri 5/3/19**	**Mon 5/6/19**			
263	1.2.5.17.1.1.1	Obtain/Prepare Validation Lists	0.25 days	Fri 5/3/19	Mon 5/6/19	259		DUN-ANL,CITY-SUP
264	1.2.5.17.1.1.2	Obtain/Prepare Violation List	0.25 days	Mon 5/6/19	Mon 5/6/19	263		DUN-ANL,CITY-SUP
265	1.2.5.17.1.1.3	Obtain Officer List	0.25 days	Mon 5/6/19	Mon 5/6/19	263		DUN-ANL,CITY-SUP
266	**1.2.5.17.1.2**	**Define Timing Requirements**	**0.35 days**	**Mon 5/6/19**	**Mon 5/6/19**			
267	1.2.5.17.1.2.1	Late Fee Application	0.1 days	Mon 5/6/19	Mon 5/6/19	265		DUN-PM,CITY-PM
268	1.2.5.17.1.2.2	Notice & Correspondence Generation	0.1 days	Mon 5/6/19	Mon 5/6/19	267		DUN-PM,CITY-PM
269	1.2.5.17.1.2.3	Transfer to Delinquent Collections	0.1 days	Mon 5/6/19	Mon 5/6/19	267		DUN-PM,CITY-PM
270	1.2.5.17.1.2.4	Other Automation Requirements	0.25 days	Mon 5/6/19	Mon 5/6/19	267		DUN-PM,CITY-PM
271	**1.2.5.17.1.3**	**Standard Comments & Remarks**	**0.2 days**	**Mon 5/6/19**	**Mon 5/6/19**			
272	**1.2.5.17.1.3.1**	**Define/Refine Standard Comments and Remarks**	**0.2 days**	**Mon 5/6/19**	**Mon 5/6/19**			
273	1.2.5.17.1.3.1.1	Notes	0.1 days	Mon 5/6/19	Mon 5/6/19	270		DUN-ANL,CITY-SUP
274	1.2.5.17.1.3.1.2	Status Change Reasons (Void, Suspend, Dismiss, etc.)	0.1 days	Mon 5/6/19	Mon 5/6/19	273		DUN-ANL,CITY-SUP
275	**1.2.5.17.1.4**	**Define Security Requirements**	**1.35 days**	**Mon 5/6/19**	**Wed 5/8/19**			
276	1.2.5.17.1.4.1	Define Profiles (feature, functions by role)	1 day	Mon 5/6/19	Tue 5/7/19	274		DUN-PM,CITY-PM
277	1.2.5.17.1.4.2	Identify Personnel for Each Profile	0.25 days	Tue 5/7/19	Wed 5/8/19	276		DUN-PM,CITY-PM
278	1.2.5.17.1.4.3	Confirm Profiles & Security Definitions	0.1 days	Wed 5/8/19	Wed 5/8/19	277		DUN-PM,CITY-PM
279	1.2.6	**Citation and Permit Processing Design Completion**	0 days	Wed 5/8/19	Wed 5/8/19	278		
280	**1.2.7**	**Design Approval**	**1 day**	**Wed 5/8/19**	**Thu 5/9/19**			
281	1.2.7.1	Confirm Approval of All Design Components	1 day	Wed 5/8/19	Thu 5/9/19	130,133,148,199,		DUN-PM,CITY-PM
282	1.3	**Design Completion**	0 days	Thu 5/9/19	Thu 5/9/19	281	Design Approval	DUN-PM,CITY-PM
283	**1.4**	**CONFIGURATION**	**34 days**	**Mon 5/6/19**	**Thu 6/20/19**			
284	**1.4.1**	**ISSUANCE & PROCESSING CONFIGURATION**	**34 days**	**Mon 5/6/19**	**Thu 6/20/19**			
285	**1.4.1.1**	**DATA CONVERSION CONFIGURATION & TESTING**	**19.35 days**	**Mon 5/6/19**	**Fri 5/31/19**			
286	**1.4.1.1.1**	**Initial Test Conversion**	**8.25 days**	**Mon 5/6/19**	**Thu 5/16/19**			
287	1.4.1.1.1.1	Develop Conversion Export Tools	3 days	Tue 5/7/19	Fri 5/10/19	83		CITY-IT,CONDUENT,DUN-P
288	1.4.1.1.1.2	Develop Conversion Export Controls	0.5 days	Fri 5/10/19	Fri 5/10/19	287		CITY-IT,CONDUENT
289	1.4.1.1.1.3	Configure Conversion Import Tools (citations, accounts, images, hearing data, etc.)	3 days	Tue 5/7/19	Fri 5/10/19	83		DUN-ENG
290	1.4.1.1.1.4	Deliver Test Export with Controls - At Least 1000 Records	1 day	Mon 5/6/19	Mon 5/6/19	71FS+20 days		CITY-IT,CONDUENT
291	1.4.1.1.1.5	Perform Data Scrubbing	1 day	Tue 5/7/19	Tue 5/7/19	290		DUN-ENG
292	1.4.1.1.1.6	Perform Test Conversion Import	2 days	Fri 5/10/19	Tue 5/14/19	289,290		DUN-ENG
293	1.4.1.1.1.7	Review/Refine Conversion Tools & Process	2 days	Tue 5/14/19	Thu 5/16/19	292		DUN-PM,DUN-ENG,CITY-P
294	1.4.1.1.1.8	Obtain Approval of Small Test Conversion	0.1 days	Thu 5/16/19	Thu 5/16/19	293	Small Test Conversion	DUN-PM,CITY-PM
295	**1.4.1.1.2**	**Volume Test Conversion**	**8.1 days**	**Tue 5/21/19**	**Fri 5/31/19**			
296	1.4.1.1.2.1	Perform/Deliver Volume File(s) Test Export with Controls	2 days	Tue 5/21/19	Thu 5/23/19	294FS+3 days		CITY-IT
297	1.4.1.1.2.2	Perform Volume File(s) Test Import	4 days	Thu 5/23/19	Wed 5/29/19	296		DUN-ENG
298	1.4.1.1.2.3	Perform Data Scrubbing	1 day	Wed 5/29/19	Thu 5/30/19	297		DUN-ENG
299	1.4.1.1.2.4	Review/Refine Conversion Tools & Process	1 day	Thu 5/30/19	Fri 5/31/19	298		DUN-PM,DUN-ENG,CITY-P
300	1.4.1.1.2.5	Obtain Approval of Volume Test Conversion	0.1 days	Fri 5/31/19	Fri 5/31/19	299	Volume Test Conversion	DUN-PM,CITY-PM
301	1.4.1.1.2.6	**Volume Test Conversion Completion**	0 days	Fri 5/31/19	Fri 5/31/19	300		
302	**1.4.1.2**	**Infrastructure Management Configuration**	**3 days**	**Thu 5/9/19**	**Tue 5/14/19**			
303	**1.4.1.2.1**	**Help Desk Support**	**0.5 days**	**Thu 5/9/19**	**Thu 5/9/19**			
304	1.4.1.2.1.1	Integrate Agency in Help Desk Support Program	0.5 days	Thu 5/9/19	Thu 5/9/19	282		DUN-IT
305	**1.4.1.2.2**	**System Administration & Maintenance**	**0.5 days**	**Thu 5/9/19**	**Thu 5/9/19**			
306	**1.4.1.2.2.1**	**Finalize Key Contact Information**	**0.1 days**	**Thu 5/9/19**	**Thu 5/9/19**			
307	1.4.1.2.2.1.1	Users of Hosted AutoISSUE	0.1 days	Thu 5/9/19	Thu 5/9/19	282		DUN-PM,CITY-PM

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
308	1.4.1.2.2.1.2	Users of Hosted AutoPROCESS	0.1 days	Thu 5/9/19	Thu 5/9/19	282		DUN-PM,CITY-PM
309	1.4.1.2.2.1.3	Users of Other Contracted Hosted Applications	0.1 days	Thu 5/9/19	Thu 5/9/19	282		DUN-PM,CITY-PM
310	1.4.1.2.2.2	Define/Refine Communication Procedures	0.5 days	Thu 5/9/19	Thu 5/9/19	282		DUN-PM,CITY-PM
311	**1.4.1.2.3**	**Database Back-up**	**1 day**	**Thu 5/9/19**	**Fri 5/10/19**			
312	1.4.1.2.3.1	Refine Back-up Procedures to Accommodate New Agency	1 day	Thu 5/9/19	Fri 5/10/19	282		DUN-IT
313	**1.4.1.2.4**	**Disaster Recovery Plan**	**2 days**	**Fri 5/10/19**	**Tue 5/14/19**			
314	1.4.1.2.4.1	Modify DRP to Accommodate New Agency	2 days	Fri 5/10/19	Tue 5/14/19	312		DUN-IT
315	**1.4.1.3**	**Configure Citation Issuance Solution**	**7.95 days**	**Thu 5/9/19**	**Tue 5/21/19**			
316	1.4.1.3.1	Citation Issuance Test Instance Configuration	2 days	Thu 5/9/19	Mon 5/13/19	282		CIVICSMART
317	1.4.1.3.2	Citation Issuance Testing	0.25 days	Mon 5/13/19	Mon 5/13/19	316		CIVICSMART
318	1.4.1.3.3	Review/Revise Test Results	0.1 days	Mon 5/13/19	Mon 5/13/19	317		DUN-AM,DUN-ANL
319	1.4.1.3.4	Client Citation Issuance Testing	1 day	Mon 5/13/19	Tue 5/14/19	318		CITY-PM,CITY-SUP
320	1.4.1.3.5	Review/Revise Test Results	0.25 days	Tue 5/14/19	Tue 5/14/19	319		CIVICSMART
321	1.4.1.3.6	Obtain Citation Issuance Test Instance Approval	0.1 days	Tue 5/14/19	Tue 5/14/19	320		DUN-PM,CITY-PM
322	1.4.1.3.7	Configure AutoISSUE Issuance Management Solution	2 days	Tue 5/14/19	Thu 5/16/19	321		CIVICSMART
323	1.4.1.3.8	Configure PEMS Solution	2 days	Thu 5/16/19	Mon 5/20/19	322		CIVICSMART
324	1.4.1.3.9	Review/Confirm Issuance Configuration	0.25 days	Mon 5/20/19	Tue 5/21/19	323		DUN-PM,DUN-AM,CITY-PN
325	**1.4.1.4**	**Configure Citation Processing Solution**	**30.25 days**	**Thu 5/9/19**	**Thu 6/20/19**			
326	1.4.1.4.1	Configure Data Entry	0.5 days	Thu 5/9/19	Thu 5/9/19	282		DUN-ANL
327	1.4.1.4.2	Configure AutoPROCESS Lists	2 days	Thu 5/9/19	Mon 5/13/19	282		DUN-ANL
328	1.4.1.4.3	Configure Boot/Tow Management	21 days	Thu 5/9/19	Fri 6/7/19	282		DUN-ANL,DUN-ENG,UR IN
329	1.4.1.4.4	Configure Payment Interfaces	0.5 days	Thu 5/9/19	Fri 5/10/19	326		DUN-ANL
330	1.4.1.4.5	Configure Payment Website	3 days	Fri 5/10/19	Wed 5/15/19	329		DUN-ENG
331	1.4.1.4.6	Configure IVR Solution	3 days	Fri 5/10/19	Wed 5/15/19	329		DUN-IT,DUN-ENG,PRWT
332	**1.4.1.4.7**	**Configure Notice Generation**	**5.3 days**	**Wed 5/15/19**	**Wed 5/22/19**			
333	1.4.1.4.7.1	Create Notice Exports	1 day	Wed 5/15/19	Wed 5/15/19	193,282,326		DUN-ANL
334	1.4.1.4.7.2	Prepare Sample Notice File for Vendor	0.1 days	Thu 5/16/19	Thu 5/16/19	333		DUN-ANL
335	1.4.1.4.7.3	Receive/Review Notice Proofs from Vendor	0.1 days	Mon 5/20/19	Mon 5/20/19	334FS+2 days		DUN-AM,DUN-ANL,DUN-P
336	1.4.1.4.7.4	Send Notice Proofs to City for Approval	0.1 days	Mon 5/20/19	Mon 5/20/19	335		DUN-AM
337	1.4.1.4.7.5	Obtain Notice Proof Approval	1 day	Tue 5/21/19	Wed 5/22/19	336FS+1 day		DUN-AM,CITY-PM
338	1.4.1.4.8	Configure Residential Parking Permit Management	3 days	Thu 5/16/19	Mon 5/20/19	333		DUN-ANL,DUN-ENG
339	1.4.1.4.9	Configure Permit Website	5 days	Tue 5/21/19	Mon 5/27/19	338		DUN-ENG
340	1.4.1.4.10	Configure Adjudication Solution	3 days	Tue 5/21/19	Thu 5/23/19	338		DUN-ANL
341	1.4.1.4.11	Configure Adjudication Website	5 days	Tue 5/28/19	Mon 6/3/19	339,340		DUN-ENG
342	1.4.1.4.12	Configure AutoISSUE Transfer File Import	0.5 days	Tue 5/21/19	Tue 5/21/19	327,338		DUN-ANL
343	1.4.1.4.13	Configure Hot Sheets & Other Interface File Imports/Export	1 day	Tue 5/21/19	Wed 5/22/19	342		DUN-ANL
344	1.4.1.4.14	Configure Outbound Correspondence	3 days	Wed 5/22/19	Mon 5/27/19	207,343		DUN-ANL
345	1.4.1.4.15	Configure Late Fee Assessment	0.5 days	Mon 5/27/19	Mon 5/27/19	344		DUN-ANL
346	1.4.1.4.16	Configure Cashiering	3 days	Tue 6/4/19	Thu 6/6/19	341,345		DUN-ANL,DUN-IT,DUN-EN
347	1.4.1.4.17	Configure Fleet, Lease/Rental Management	2 days	Fri 6/7/19	Mon 6/10/19	346		DUN-ANL
348	1.4.1.4.18	Configure In-State DMV Solution	0.5 days	Tue 6/11/19	Tue 6/11/19	347		DUN-ANL
349	1.4.1.4.19	Configure Out-of-State DMV Solution	0.5 days	Tue 6/11/19	Tue 6/11/19	347		DUN-ANL
350	1.4.1.4.20	Configure Pennsylvania Real-Time DMV Request Solution	0.5 days	Tue 6/11/19	Tue 6/11/19	347		DUN-DMV,DUN-IT
351	1.4.1.4.21	Configure Red Light/Speed Violation Interface	0.5 days	Tue 6/11/19	Tue 6/11/19	350		DUN-ANL
352	1.4.1.4.22	Configure Standard Reporting	2 days	Tue 6/11/19	Thu 6/13/19	350		DUN-ANL
353	1.4.1.4.23	Configure Ad Hoc Reporting	2 days	Thu 6/13/19	Mon 6/17/19	352		DUN-ANL
354	1.4.1.4.24	Configure Management Dashboard	2 days	Fri 6/7/19	Mon 6/10/19	346		DUN-ENG
355	1.4.1.4.25	Configure Collections Imports/Export	2 days	Mon 6/17/19	Wed 6/19/19	353		DUN-ANL
356	1.4.1.4.26	Configure User Security	1 day	Wed 6/19/19	Thu 6/20/19	355		DUN-ANL
357	1.4.1.4.27	Configure Officer List	0.5 days	Wed 6/19/19	Wed 6/19/19	355		DUN-ANL
358	**1.4.1.5**	**Configure Docupeak**	**8 days**	**Thu 5/9/19**	**Tue 5/21/19**			
359	1.4.1.5.1	Configure Docupeak System and Workflows	5 days	Thu 5/9/19	Thu 5/16/19	222,282		DUN-ANL

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
360	1.4.1.5.2	Configure SFTP Site for Document Exchange	0.5 days	Thu 5/9/19	Thu 5/9/19	282		DUN-IT,CITY-IT
361	1.4.1.5.3	Configure Document Imaging	1 day	Thu 5/16/19	Fri 5/17/19	359		DUN-ANL
362	1.4.1.5.4	Set up Docupeak User Security	0.5 days	Fri 5/17/19	Fri 5/17/19	361		DUN-ANL
363	1.4.1.5.5	Create Docupeak Reports	1 day	Fri 5/17/19	Mon 5/20/19	362		DUN-ANL
364	1.4.1.5.6	Review/Confirm Processing Configuration	0.5 days	Mon 5/20/19	Tue 5/21/19	363		DUN-PM,DUN-ANL
365	**1.4.1.6**	**Configure Web Solution**	**12.75 days**	**Tue 5/21/19**	**Thu 6/6/19**	**364**		
366	1.4.1.6.1	Configure Customer Account Portal	7 days	Tue 5/21/19	Thu 5/30/19			DUN-ENG
367	1.4.1.6.2	Integrate Other Websites into Portal	3 days	Tue 6/4/19	Thu 6/6/19	330,339,341,366		DUN-ENG
368	**1.4.1.7**	**Operational Procedures Configuration**	**3.5 days**	**Mon 6/17/19**	**Thu 6/20/19**			
369	1.4.1.7.1	Prepare/Revise User Documentation	3 days	Mon 6/17/19	Thu 6/20/19	353,364,366		DUN-ANL
370	1.4.1.7.2	Revise Quality Assurance Plan	0.5 days	Thu 6/20/19	Thu 6/20/19	369		DUN-PM
371	1.5	**Configuration Completion**	0 days	Thu 6/20/19	Thu 6/20/19	324,364,370	Configuration Approval	DUN-PM,CITY-PM
372	**1.6**	**INSTALLATION**	**4.6 days**	**Mon 6/24/19**	**Fri 6/28/19**			
373	**1.6.1**	**EQUIPMENT INSTALLATION**	**4.6 days**	**Mon 6/24/19**	**Fri 6/28/19**			
374	1.6.1.1	Receive/Inspect HW/SW on Client Site	0.25 days	Mon 6/24/19	Mon 6/24/19	141FS+5 days,371		CITY-PM
375	1.6.1.2	Install/Test Communication Lines & Equipment (as required)	0.25 days	Mon 6/24/19	Mon 6/24/19	374		DUN-IT,CITY-IT
376	1.6.1.3	Install/Test Enforcement Hardware/Software	2 days	Mon 6/24/19	Wed 6/26/19	375		SUBC,CITY-IT
377	1.6.1.4	Install/Test Cashiering Equipment	4 days	Mon 6/24/19	Fri 6/28/19	375		DUN-IT,CITY-IT
378	1.6.1.5	Install/Test Desktop/Laptop Hardware/Software	0.5 days	Mon 6/24/19	Mon 6/24/19	375		DUN-IT,CITY-IT
379	1.6.1.6	Install/Test Scanning Hardware/Software (as required)	1 day	Tue 6/25/19	Tue 6/25/19	378		DUN-IT,CITY-IT
380	1.6.1.7	Confirm Installation Completion	0.1 days	Fri 6/28/19	Fri 6/28/19	375,376,377,378,		DUN-PM,DUN-IT,CITY-PM
381	1.7	**Installation Completion**	0 days	Fri 6/28/19	Fri 6/28/19	380	Installation Approval	DUN-PM,CITY-PM
382	**1.8**	**TRAINING**	**5.75 days**	**Fri 6/28/19**	**Wed 7/10/19**			
383	**1.8.1**	**Prepare/Refine Training Schedule**	**0.25 days**	**Fri 6/28/19**	**Fri 6/28/19**			
384	1.8.1.1	Review/Revise Training Schedule	0.25 days	Fri 6/28/19	Fri 6/28/19	281,381		DUN-PM,CITY-PM
385	**1.8.2**	**City/PRWT Staff Training**	**5.5 days**	**Fri 6/28/19**	**Wed 7/10/19**			
386	1.8.2.1	Refine Training Materials	0.5 days	Fri 6/28/19	Mon 7/1/19	384		DUN-PM,DUN-AM
387	1.8.2.2	Coordinate Training Facility Requirements	0.5 days	Fri 6/28/19	Mon 7/1/19	384		CITY-PM,DUN-PM
388	**1.8.2.3**	**Conduct Training**	**5 days**	**Mon 7/1/19**	**Wed 7/10/19**			
389	1.8.2.3.1	Issuance - Handhelds	1.5 days	Mon 7/1/19	Tue 7/2/19	387		CIVICSMART,CITY-SUP,CITY
390	1.8.2.3.2	Issuance - Back Office	0.5 days	Tue 7/2/19	Wed 7/3/19	389		CIVICSMART,CITY-SUP,CITY
391	1.8.2.3.3	Processing Standard	1 day	Mon 7/1/19	Tue 7/2/19	387		DUN-PM,CITY-SUP,CITY-PM
392	1.8.2.3.4	Processing Special (Cashiering, Adjudication, Booting/Towing, etc.)	3 days	Tue 7/2/19	Tue 7/9/19	391		DUN-PM,CITY-ACCT,CITY-S
393	1.8.2.3.5	Conduct Additional Training (as required)	1 day	Tue 7/9/19	Wed 7/10/19	392		DUN-PM,CITY-CLERK,CITY-
394	1.9	**Training Completion**	0 days	Wed 7/10/19	Wed 7/10/19	393	Training Approval	DUN-PM,CITY-PM
395	**1.10**	**TESTING**	**22.93 days**	**Fri 6/21/19**	**Thu 7/25/19**			
396	**1.10.1**	**Enforcement Validation**	**0.6 days**	**Wed 6/26/19**	**Thu 6/27/19**			
397	1.10.1.1	Conduct Handheld Enforcement Testing	0.25 days	Wed 6/26/19	Wed 6/26/19	376		SUBC
398	1.10.1.2	Conduct Back Office Enforcement System Testing	0.25 days	Wed 6/26/19	Wed 6/26/19	397		SUBC
399	1.10.1.3	Validate Enforcement Solution	0.1 days	Thu 6/27/19	Thu 6/27/19	398		DUN-PM
400	**1.10.2**	**Processing Validation**	**22.2 days**	**Fri 6/21/19**	**Thu 7/25/19**			
401	**1.10.2.1**	**Unit Testing**	**6.85 days**	**Fri 6/21/19**	**Mon 7/1/19**			
402	1.10.2.1.1	Electronic Parking Citation Interfaces	0.25 days	Fri 6/21/19	Fri 6/21/19	371		DUN-ANL,CIVICSMART
403	1.10.2.1.2	Manual Citation Data Entry Process	0.25 days	Fri 6/21/19	Fri 6/21/19	371		DUN-ANL
404	1.10.2.1.3	Boot/Tow Processing	3 days	Fri 6/21/19	Wed 6/26/19	403		DUN-ANL,DUN-ENG,UR IN
405	1.10.2.1.4	Cashiering	1 day	Fri 6/21/19	Mon 6/24/19	403		DUN-ANL,DUN-IT
406	1.10.2.1.5	IVR Interface	0.25 days	Mon 6/24/19	Mon 6/24/19	405		DUN-ANL,DUN-ENG,PRWT
407	1.10.2.1.6	Payment Website (Inquiry & Payments)	0.25 days	Mon 6/24/19	Mon 6/24/19	406		DUN-ANL,DUN-PM
408	1.10.2.1.7	Payment Processing	0.25 days	Mon 6/24/19	Mon 6/24/19	407		DUN-ANL
409	1.10.2.1.8	Docupeak Inbound Correspondence Workflow Solution	0.5 days	Tue 6/25/19	Tue 6/25/19	408		DUN-ANL
410	1.10.2.1.9	Parking Permit Issuance and Website	1 day	Tue 6/25/19	Wed 6/26/19	409		DUN-ANL
411	1.10.2.1.10	Adjudication Processing and Website	1 day	Wed 6/26/19	Thu 6/27/19	410		DUN-ANL

ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
412	1.10.2.1.11	Notice Generation	0.25 days	Thu 6/27/19	Thu 6/27/19	411		DUN-ANL
413	1.10.2.1.12	Outbound Correspondence Processing	0.25 days	Thu 6/27/19	Thu 6/27/19	412		DUN-ANL
414	1.10.2.1.13	In-State DMV Interface RO Process	0.25 days	Fri 6/28/19	Fri 6/28/19	413		DUN-ANL
415	1.10.2.1.14	In-State DMV Interface Hold/Release Process	0.25 days	Fri 6/28/19	Fri 6/28/19	414		DUN-ANL
416	1.10.2.1.15	Out-of-State DMV Interface RO Process	0.25 days	Fri 6/28/19	Fri 6/28/19	415		DUN-ANL
417	1.10.2.1.16	Special Considerations Processing (Overpayments, Refunds,etc.)	0.25 days	Fri 6/28/19	Fri 6/28/19	416		DUN-ANL
418	1.10.2.1.17	Management Reporting	0.25 days	Mon 7/1/19	Mon 7/1/19	417		DUN-ANL
419	1.10.2.1.18	Collections Interface	0.25 days	Mon 7/1/19	Mon 7/1/19	418		DUN-ANL
420	1.10.2.1.19	Unit Testing Review	0.25 days	Mon 7/1/19	Mon 7/1/19	419		DUN-PM,DUN-ANL
421	1.10.2.1.20	Validate Unit Testing	0.1 days	Mon 7/1/19	Mon 7/1/19	420	Approved Unit Test	DUN-PM,DUN-ANL
422	**1.10.2.2**	**System Testing**	**14.35 days**	**Tue 7/2/19**	**Thu 7/25/19**			
423	1.10.2.2.1	Conduct System Testing	7 days	Tue 7/2/19	Mon 7/15/19	391,421FS+1 day		DUN-PM,DUN-ANL,CITY-PI
424	1.10.2.2.2	System Testing Review	1 day	Mon 7/15/19	Tue 7/16/19	423		DUN-PM,CITY-PM
425	1.10.2.2.3	Review/Resolve Issues	5 days	Tue 7/16/19	Tue 7/23/19	424		DUN-ANL,DUN-ENG,DUN-I
426	1.10.2.2.4	Retest Resolved System Components	1 day	Tue 7/23/19	Wed 7/24/19	425		DUN-PM,DUN-ANL,CITY-PI
427	1.10.2.2.5	System Testing Review	0.25 days	Wed 7/24/19	Thu 7/25/19	426		DUN-PM,CITY-PM
428	1.10.2.2.6	Validate System Testing	0.1 days	Thu 7/25/19	Thu 7/25/19	427	Approved System Test	DUN-PM,CITY-PM
429	**1.10.3**	**Readiness Assessment**	**0.73 days**	**Thu 7/25/19**	**Thu 7/25/19**			
430	1.10.3.1	Conduct Final Readiness Assessment	1 hr	Thu 7/25/19	Thu 7/25/19	399,428		DUN-PM,CITY-PM
431	1.10.3.2	Review/Resolve Issues	0.5 days	Thu 7/25/19	Thu 7/25/19	430		DUN-PM,CITY-PM
432	1.10.3.3	Obtain Readiness Approval	0.1 days	Thu 7/25/19	Thu 7/25/19	431		DUN-PM,CITY-PM
433	1.11	**Implementation Approval**	0 days	Thu 7/25/19	Thu 7/25/19	432	Implementation Approval	DUN-PM,CITY-PM
434	**1.12**	**IMPLEMENTATION**	**29.63 days**	**Fri 6/21/19**	**Wed 7/31/19**			
435	**1.12.1**	**Initiate Outreach Communication Plan**	**23.03 days**	**Fri 6/21/19**	**Thu 7/25/19**			
436	1.12.1.1	Client Organization	5 days	Fri 6/21/19	Thu 6/27/19	371		DUN-PM,CITY-PM
437	1.12.1.2	Current Vendor Communication	0.1 days	Fri 6/21/19	Fri 6/21/19	371		CITY-PM
438	1.12.1.3	Public Communication	7 days	Fri 6/28/19	Wed 7/10/19	436		DUN-PM,CITY-PM
439	1.12.1.4	Duncan (management, operations, third parties & support organization)	0.1 days	Thu 7/25/19	Thu 7/25/19	433		DUN-PM
440	**1.12.2**	**Conversion Timeline**	**2 days**	**Fri 6/21/19**	**Mon 6/24/19**			
441	1.12.2.1	Establish Conversion Timeline	1 day	Fri 6/21/19	Fri 6/21/19	371		CITY-IT,CITY-PM,DUN-IT,DI
442	1.12.2.2	Obtain Conversion Timeline Approval	1 day	Mon 6/24/19	Mon 6/24/19	441		CITY-PM,DUN-PM
443	**1.12.3**	**Data Conversion (FINAL)**	**5.2 days**	**Fri 7/26/19**	**Wed 7/31/19**			
444	1.12.3.1	Suspend Current City/Vendor Operations at Midnight	0.1 days	Fri 7/26/19	Fri 7/26/19	433FS+1 day		CITY-PM
445	1.12.3.2	Prepare FINAL Conversion Files With Controls	1 day	Fri 7/26/19	Sat 7/27/19	444		CITY-IT
446	1.12.3.3	Perform FINAL Conversion	3 days	Sat 7/27/19	Tue 7/30/19	445		DUN-ENG
447	1.12.3.4	Data Scrubbing	0.5 days	Tue 7/30/19	Tue 7/30/19	446		DUN-ENG
448	1.12.3.5	Review/Refine Conversion Data	0.5 days	Tue 7/30/19	Wed 7/31/19	447		DUN-AM,DUN-ENG,DUN-F
449	1.12.3.6	Obtain Acceptance of FINAL Conversion	0.1 days	Wed 7/31/19	Wed 7/31/19	448		DUN-PM,CITY-PM
450	**1.12.4**	**Implement Operations**	**0.5 days**	**Wed 7/31/19**	**Wed 7/31/19**			
451	1.12.4.1	Decommission Current City Systems/Processes	0.25 days	Wed 7/31/19	Wed 7/31/19	449		CITY-PM
452	1.12.4.2	Implement City Operations	0.5 days	Wed 7/31/19	Wed 7/31/19	449		CITY-PM,CITY-SUP
453	1.12.4.3	Implement Data File Management Operations	0.5 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM
454	1.12.4.4	Implement Data Entry Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,PRWT
455	1.12.4.5	Implement IVR Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-ENG,DUN-I
456	1.12.4.6	Implement Web Interfaces	0.5 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-EI
457	1.12.4.7	Implement Call Center Customer Service Operations	0.5 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,PRWT
458	1.12.4.8	Implement Correspondence Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-AI
459	1.12.4.9	Implement Noticing Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-AI
460	1.12.4.10	Implement Fleet, Lease/Rental Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-AI
461	1.12.4.11	Implement RPP Operations	0.5 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-AI
462	1.12.4.12	Implement Boot/Tow Operations	0.5 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-EI
463	1.12.4.13	Implement Adjudication Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-AI

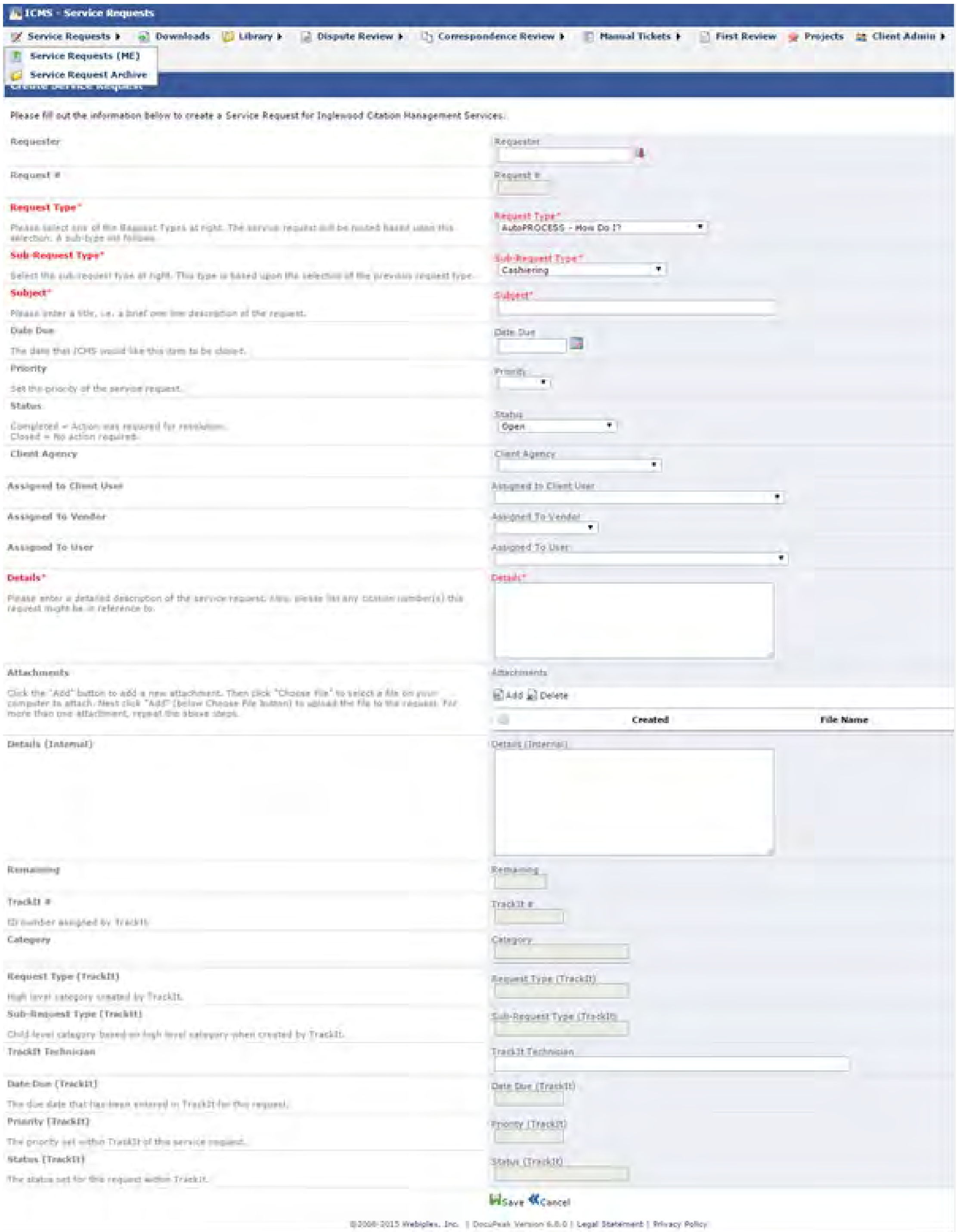
ID	WBS	Task Name	Duration	Start	Finish	Predecessors	Deliverables/Outcomes	Resource Names
464	1.12.4.14	Implement Other Processing Operation Components	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-AI
465	1.12.4.15	Implement Collection Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-AI
466	1.12.4.16	Implement Financial Management Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM
467	1.12.4.17	Implement Management Reporting Operations	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM
468	1.12.4.18	Initiate Support Plan	0.25 days	Wed 7/31/19	Wed 7/31/19	449		DUN-PM,DUN-AM,DUN-IT
469	1.13	**Project Completion**	0 days	Wed 7/31/19	Wed 7/31/19	450	Project Sign Off	DUN-PM,CITY-PM
470	**1.14**	**PROJECT WRAP-UP**	**3.5 days**	**Wed 8/7/19**	**Tue 8/13/19**			
471	1.14.1	Implement Process Automation	3 days	Wed 8/7/19	Mon 8/12/19	469FS+5 days		DUN-PM,DUN-AM,DUN-AI
472	1.14.2	Post-Implementation Review	0.5 days	Fri 8/9/19	Mon 8/12/19	469FS+7 days	List of Follow-Up Tasks	DUN-PM,CITY-PM
473	1.14.3	Project Closure	1 day	Mon 8/12/19	Tue 8/13/19	472		DUN-PM

ONGOING SUPPORT

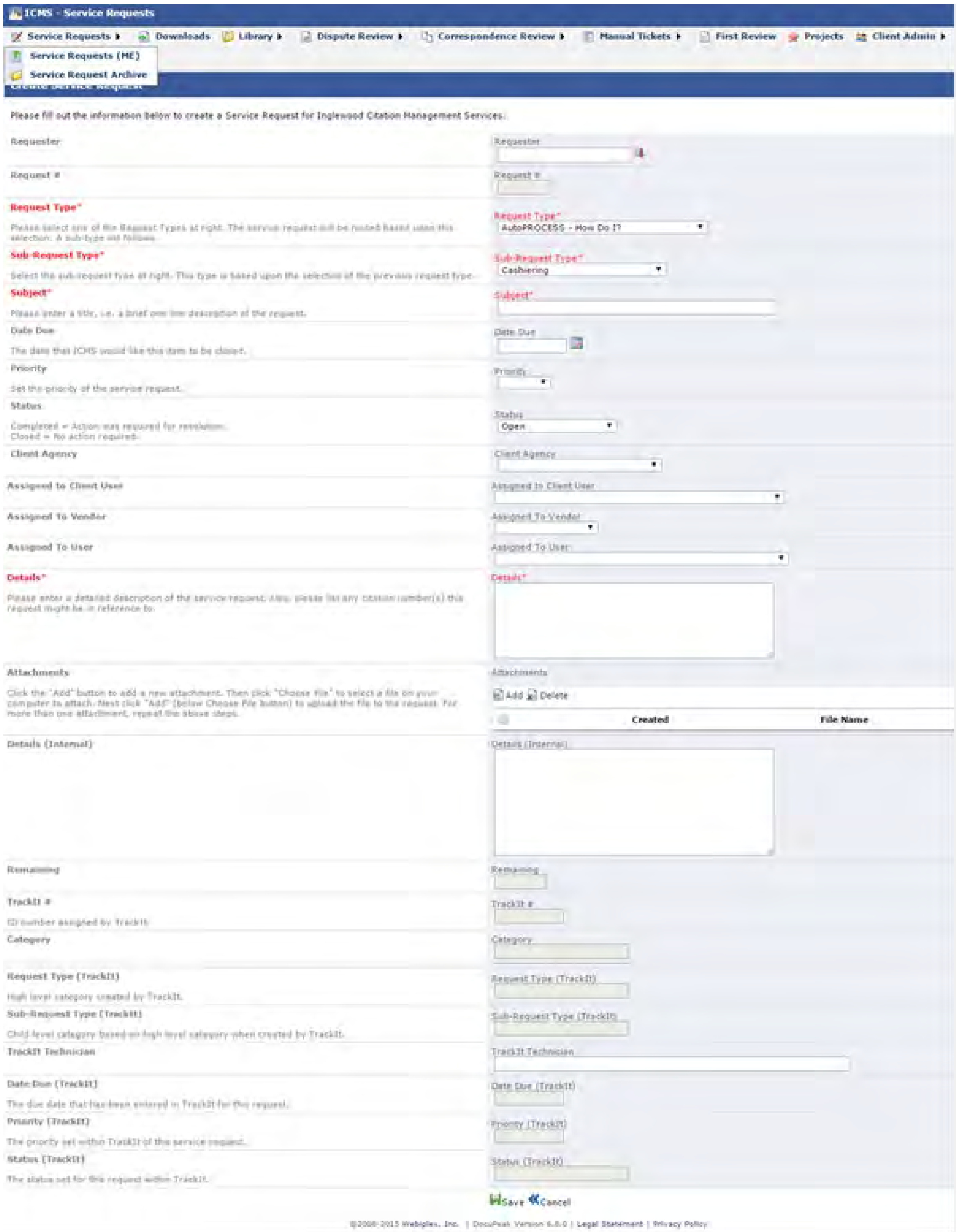
One of the primary systems provided by Webiplex is a web-based system used to enhance communications and coordination of services. The system is known as "Client Support Management System." This system provides access 24/7/365 for the City to report service issues, obtain copies of reports, and verify status of collection account disputes resolution and to process rejected citations. The system also provides an electronic document library for storage and retrieval of client documents such as service agreements, billing statements, training materials, security forms, system enhancement documentation, and monthly operating reports. The system is accessed from a standard web browser and access is controlled by password and assignment of privilege and access to document folders.

The CSM system is the primary method Client staff report service issues to Duncan staff. Service request issues range from reporting a processing system problem, coordinating changes in notices, requesting training, taking action on a citation, requesting assistance for generating a report, requesting a system enhancement, ordering ticket writer supplies and obtaining customer service or technical support assistance. The number of days remaining on the project time plan is reported for each task to provide a method to judge workload and schedule staff. The CSM System uses a web form to report the information about the incident. Drop-down lists are available to select the proper service category. This saved work request will generate an e-mail notification request to the correct person or group to address the City's request for service.

CSM Web Interface for Support and Service Requests

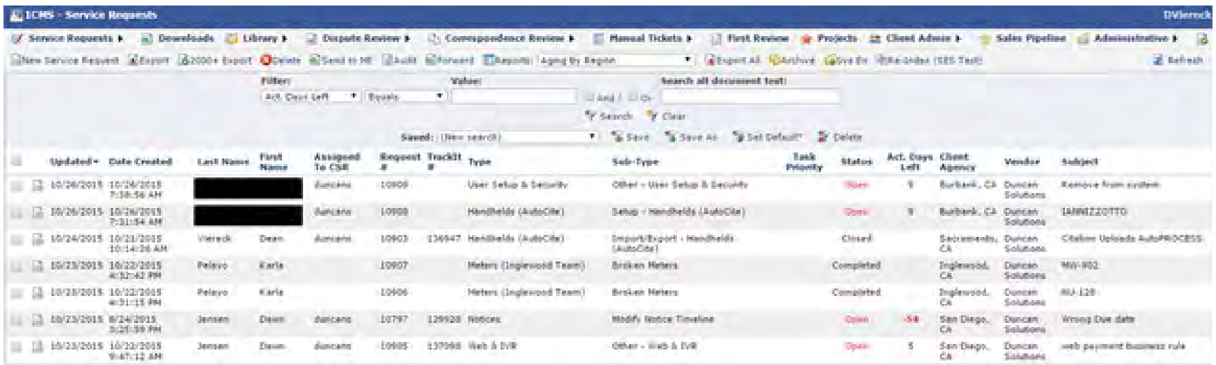


CSM Web Interface for Support and Service Requests



When service requests are submitted through this portal, the City can see all requests, status and whom it's been assigned to at Duncan.

CSM Portal for Service Requests



Updated	Date Created	Last Name	First Name	Assigned To CSR	Request #	Trackit #	Type	Sub-Type	Task Priority	Status	Act. Days Left	Client Agency	Vendor	Subject
10/26/2015	10/26/2015 7:38:56 AM	[redacted]		duncans	10909		User Setup & Security	Other - User Setup & Security		Open	5	Burbank, CA	Duncan Solutions	Remove from system
10/26/2015	10/26/2015 7:31:54 AM	[redacted]		duncans	10908		Handhelds (AutoCite)	Setup - Handhelds (AutoCite)		Open	5	Burbank, CA	Duncan Solutions	IANNIZZOTTO
10/24/2015	10/21/2015 10:14:26 AM	Viereck	Dean	duncans	10903	136947	Handhelds (AutoCite)	Import/Export - Handhelds (AutoCite)		Closed		Sacramento, CA	Duncan Solutions	Citation Uploads AutoPROCESS
10/23/2015	10/22/2015 4:32:42 PM	Pelayo	Karla		10907		Meters (Inglewood Team)	Broken Meters		Completed		Inglewood, CA	Duncan Solutions	MW-902
10/23/2015	10/22/2015 4:31:15 PM	Pelayo	Karla		10906		Meters (Inglewood Team)	Broken Meters		Completed		Inglewood, CA	Duncan Solutions	MU-128
10/23/2015	8/24/2015 3:25:59 PM	Jensen	Dawn	duncans	10797	129928	Notices	Modify Notice Timeline		Open	-58	San Diego, CA	Duncan Solutions	Wrong Due date
10/23/2015	10/22/2015 9:47:12 AM	Jensen	Dawn	duncans	10905	137098	Web & IVR	Other - Web & IVR		Open	5	San Diego, CA	Duncan Solutions	web payment business rule

Each request is automatically logged, assessed, and resolved or routed for further analysis and final resolution. The standard service levels corresponding to each reported issue depend significantly on the nature of the issue reported. For instance, owing to the inherent severity of the issue and its impact, defects that impact the availability of the entire AutoPROCESS system necessarily demand a higher priority than defects such as a misspelling in a field title in a report. While both are defects, one clearly demands instant attention, and the other can be addressed in due course.

Similarly, Duncan has developed a process that rapidly allows our specialists to quickly document, analyze, and resolve issues using a triaging process starting at the Help Desk. Level 1 focuses on initial problem documentation, rapid troubleshooting, and resolving issues related to specific hardware and user environments. Most issues are resolved at this stage without requiring extensive follow-up or issue escalation.

Level 2 focuses on application-level analysis and fixes. These issues generally require detailed knowledge of the system and the customized instance developed specifically for the City, and, in many cases, such issues can be resolved immediately. Items that require changes in programming are diagnosed in Level 2 by application or database specialists, but are generally escalated to Level 3 for code fixes.

Level 3 includes both the implementation and testing of code fixes, as well as the diagnosis of issues that were not able to be fully explained at Levels 1 or 2. All changes to code are tested in dedicated development environments prior to release into production. Wherever possible, fixes are released as part of regular system updates performed on a scheduled basis.

The Duncan Help Desk is available 24/7 to respond to service requests. The Help Desk can be contacted via a toll-free 800 number, the web, or e-mail. This single point of contact will be used for reporting all service requests.

Duncan provides a technical support staff that is accessible 24/7, 365 days per year via a toll-free telephone number. Technical support staff members are able to handle many inquiries, and additional personnel resources are available to call on should more complex situations warrant.

G. Company Financial Information

With a strong track record for stability, profitability, and growth, Duncan can be counted on as a reliable partner both now and in the future. As evidenced by our steady revenue growth, bottom-line results, and continuously growing demand for services, Duncan and its corporate parent, Navient Corporation, are positioned to serve as a financially and operationally stable partner for STLTO.

Duncan is a U.S. company headquartered in Milwaukee, WI. Since 2017, Duncan has been a wholly owned subsidiary of Navient Corporation. Navient audited financial statements, which are provided as an attachment, reflect the financial condition of both Duncan and Navient. These documents include the last three years of our consolidated income statements, balance sheets, cash flow statements, and the assessment of our independent auditors, KPMG. These documents as well as other SEC filings are located online at www.navient.com/about/investors/stockholderinfo/secfilings/default.aspx.

FINANCIAL REFERENCES

Contact Name	Contact Info	
Abby Weprin Global Transaction Services Insurance and Specialty Finance Bank of America Merrill Lynch	**Address**	1301 East Ogden Avenue Naperville, IL 60563
	Phone Number	312-992-6007
	Fax	NA
	Email	abby.l.weprin@baml.com
Andy Hanson National Relationship Manager National Account Management Division Fifth Third Bank	**Address**	222 South Riverside Plaza Chicago, IL 60606
	Phone Number	616-653-5216
	Fax	NA
	Email	Andrew.Hanson@53.com

AUDITOR STATEMENT

We have provided Navient's audited financial statements, which include statements from our independent auditors.

SOC 2 REPORT

We have provided our SOC 2 report as an attachment to this proposal. This can be found in the Appendices Section.

PENDING LAWSUITS OR LITIGATION AS RELATED

Professional Account Management, LLC is not currently involved in any legal actions or similar proceedings with any governmental agency in which it has a contractual relationship.

MBE/WBE UTILIZATION

At this time, Duncan is not proposing the use of any MBE/WBE subcontractors.

2. EXPERIENCE AND CAPACITY

Describe background and experience demonstrating ability to provide required services.

For more than 30 years, Duncan has partnered with a variety of clients in support of their parking management programs.

Duncan has extensive experience providing a variety of services to government and toll agency clients across the country, and in operating in nearly 200 municipalities, our system handles annual citation issuance volumes of nearly 6 million transactions and totaling more than $100 million.

Duncan brings several distinct experience-based capabilities that distinguish our proposed solution:

- Duncan and its affiliates serve nearly 200 municipal clients with industry leading parking processing and/or collections services including Milwaukee, WI; San Diego, CA; New Orleans, LA; Detroit, MI; Pittsburgh, PA, and many more. Our systems and solutions have been developed and continually refined over the last 30 years to meet the specific needs of local government and nuances of dynamic parking management program.
- We offer the most advanced parking citation management system in the industry, known as **AutoPROCESS** – Duncan's user-friendly citation processing system, which leverages our proven technology framework and business rules from the 30+ year history of our system.

This base of experience provides the unique combination of familiarity, proven capability, and balanced perspective to offer low-risk, high-reward service delivery to STLTO. Duncan continuously works to develop and enhance our parking citation processing and collection services.

Duncan Annualized Operational Statistics	
Items Handled Using AutoPROCESS	Annual Totals
Citations Processed	5.5M
Lockbox Payments Processed (Transactions)	2M
Client Revenues Processed (Value)	$240M
Calls Handled (IVR and CSR)	4M
Notices Sent	10M
Registered Owner Acquisition	15M

Today, Duncan processes approximately 5.5 million parking citations annually, with a combined value of over $540 million, and in 2018, Duncan garnered revenues in excess of $60 million through our contracts and operations. Duncan's dedicated staff of 228 employees serves our clients in all aspects of parking and transportation management, with unparalleled parking industry expertise.

COMPANY HISTORY

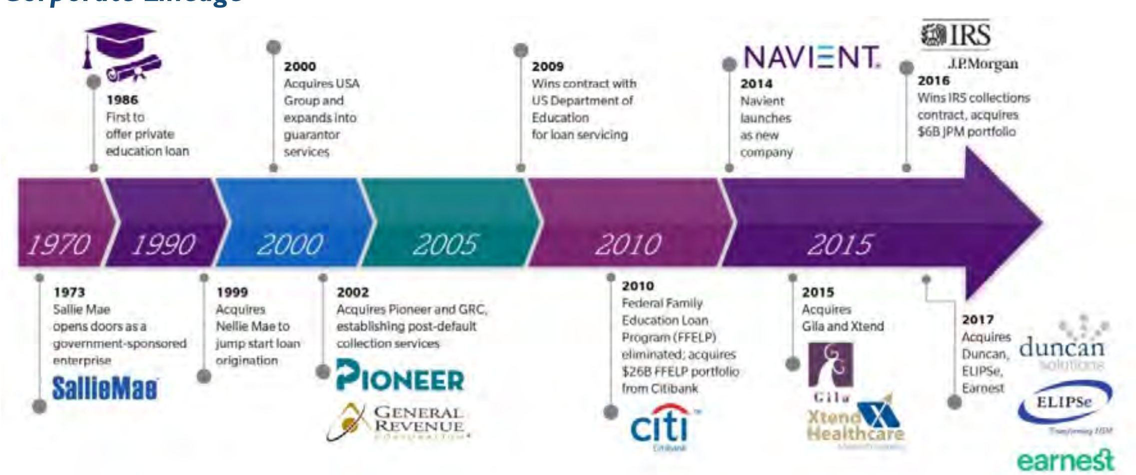
Formed in 2005, Duncan Solutions brought together the capabilities of Professional Account Management, LLC (PAM), a leading collection agency focused on delivering solutions for vehicle-based debts, and Enforcement Technology, Inc. (ETEC), a company focused on technology solutions for police and transportation agencies in the government arena. Both PAM and ETEC brought legacies dating back decades.

In 2008, Duncan further broadened its capabilities when it acquired Law Enforcement Systems, LLC (LES), which possessed unique capabilities for facilitating DMV data acquisition for transportation and tolling agency clients across North America.

The capabilities of all three Duncan subsidiaries – PAM, ETEC, and LES – are harnessed for municipal and transportation agency clients through a customized service offering incorporating parking management, debt collection services, DMV lookup, and specialized skip-tracing services. **PAM is a licensed collection agency with the ability to collect in all 50 states and the District of Columbia.**

Duncan's unique value was recognized in August of 2017 when Duncan was acquired by Navient Corporation, further solidifying our reputation as a leader in the industry. With the financial backing of Navient, a growing and stable Fortune 1000 firm, Duncan is able to enhance our core capabilities with additional resources, tools, and expertise for our collection strategies, call center management tools and compliance, and complaint management processes. Many of these functions are key components of Navient's loan servicing business, so they are easily applied to enhance Duncan's capabilities in support of STLTO.

Corporate Lineage



A part of Navient's business processing group since 2017, Duncan is the organization's transportation processing division, adding to an already extensive government services segment.

CAPACITY

AutoPROCESS is the chosen solution regardless of the size, scope, or level of sophistication of a program. Currently, we have clients with annual volumes ranging from 5,000 to 750,000 citations, and can expand further to handle clients with even larger issuance volumes.

Our AutoPROCESS citation processing and revenue management system has proven to be a dependable workhorse, meeting the operational and financial management needs of numerous clients with annual issuance volumes comparable to that of the City. Our system runs on a modern database and is easily customized to meet STLTO's specific requirements. Extensive use of definable parameters and rules tables allows the application to be quickly and accurately configured. The structure of the application and database make it easy to configure any module within AutoPROCESS to meet the changing needs of STLTO without relying on the time-consuming process of having programmers review, modify, compile, test, and release new lines of code.

Representative Duncan Citation Processing Clients

Client Name	Annual Citation Issuance
Milwaukee, WI	750,000
San Diego, CA	550,000
New Orleans, LA	350,000
Detroit, MI	300,000
Pittsburgh, PA	250,000
Sacramento, CA	225,000
Atlanta, GA	200,000
Inglewood, CA	100,000
Alexandria, VA	75,000
Raleigh, NC	75,000

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3. REFERENCES

List references from contracts similar in size and scope.
o Must furnish at least five (5) references from municipalities with the same software, three (3) of which with minimal installations of more than 7,000 parking spaces
o History of equipment installed in other municipalities with references and contact information
o Minimum of three (3) years' experience with installed hardware and one (1) year of field installed experience

Duncan has extensive experience providing a variety of services to government and toll agency clients across the country. We provide processing and/or collections systems and services to nearly 200 municipalities across the U.S. This includes many municipalities that are similar to the City of St. Louis in not only size but also services performed within the last 3 years.

This section includes references for the following clients:

- Pittsburgh, PA
- New Orleans, LA
- Milwaukee, WI
- San Diego, CA
- Miami, FL
- Atlanta, GA

CITY OF PITTSBURGH, PENNSYLVANIA

Pittsburgh PARKING Authority
The Value Parking Network

Contact Name	Dave Onorato
Title	Parking Court Administrator
Agency	Pittsburgh Parking Authority
Phone	412-560-2512
Fax	412-560-7200
Email	donorato@pittsburghparking.com
Address	232 Boulevard of the Allies Pittsburgh, PA 15222
Contract Dates	Original contract start: 03/2005 Current contract: 04/2015 – 04/2020
Years of service	14

Agency Testimony: November 8, 2016

"Not once in the past 11 years have we considered changing providers".
N. Davis, PPC Operations Manager, personal communications

In September 2014, Duncan proposed adding online hearings to allow customers the opportunity to contest their citations without the inconvenience of an in-person court appearance. Online hearings have been well received by the customers and now comprise 70% of the total hearings conducted.

Work performed:

- Citation processing using AutoPROCESS™
- Delinquent collections using AutoCOLLECT™
- Exceptional customer service
- Integration of AutoPROCESS™ with Authority's existing handheld devices
- Booting services, towing services, and lot management
- Integrated Mobile License Plate Recognition (MLPR) technology
- Court administration and docket management
- Adjudication support services
- Internet and IVR payment processing
- In-person and online adjudication support services
- Handheld citation issuing hardware and software

Annual citation issuance: 255,000

Annual citation revenue: $9,800,000

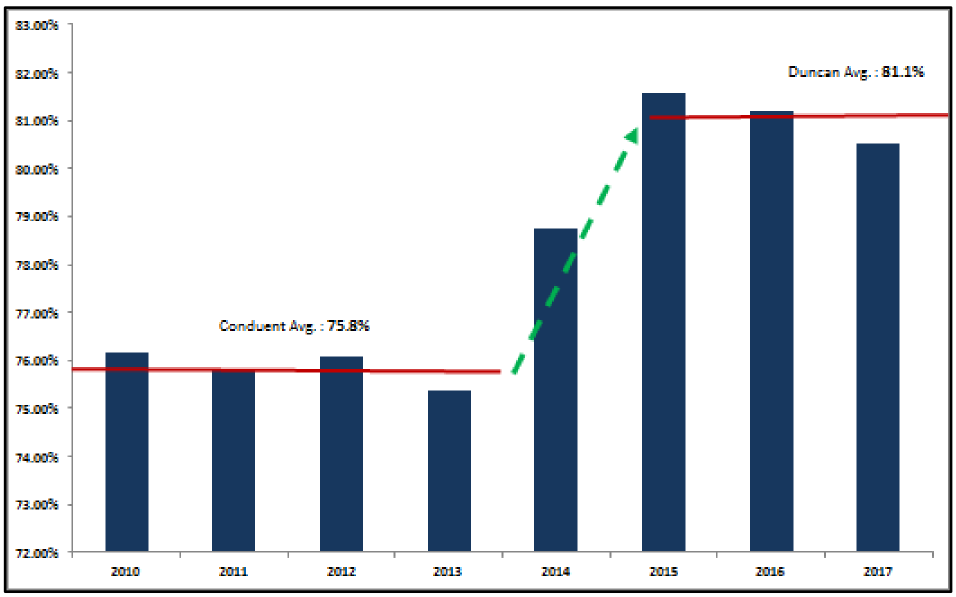
Project summary: The Pittsburgh Parking Authority awarded a broad-based, parking management service contract to Duncan in March 2005. The contract required us to provide for the operation of the Pittsburgh Parking Court, a full-featured citation management system; citation processing services; development and operation of a boot/tow program; customer service features including a call center, web-based payment capabilities and multiple walk-in cashier stations; and integration of our AutoPROCESS system with the Authority's existing handheld devices. At the time, the Authority had no experience in the processing of parking citation management and therefore needed a "ground floor" solution. Citation revenue increased from ~$3M per year to over $6M by 2006, through implementation of our services, including a secondary collection program.

CITY OF NEW ORLEANS, LOUISIANA

CITY OF NEW ORLEANS

Contact Name	Enrico Sterling
Title	Parking Administrator
Agency	Department of Public Works
Phone	504-658-8200
Fax	504-658-8100
Email	sterling@nola.gov
Address	1300 Perdido St., New Orleans, LA 70112
Contract Dates	08/2014 - Present
Years of Service	5

Collection rate trends: Conduent vs. Duncan



Since taking over the contract in August 2014, average annual collection rates have increased by 6.5%, resulting in an 80+% collection rate, an industry benchmark achieved by only the most well-run on-street parking programs in the country.

Work Performed

- Data conversion (from Conduent)
- Citation processing
- Boot and tow tracking and impound lot management
- Habitual violator list
- In-state and out-of-state registered owner acquisition
- Document management and workflow
- Online permits and printed summons
- Automated reports
- Notes and comments on printed summons
- Customer service, call center operations
- Handheld citation issuance hardware and software

CITY OF MILWAUKEE, WISCONSIN

Contact Name Tom Woznick
Title Parking Operations Manager
Agency Department of Public Works
Phone 414-286-3635
Fax 414-286-3953
Email twozni@milwaukee.gov
Address Municipal Building, 841 North Broadway, 6th floor, Milwaukee, WI 53202
Contract Dates 05/1998 to present
Years of Service 21

Key project details:

- Data conversion
- Processing
- Data entry
- Boot & tow support
- Hearing scheduling
- Automated reports
- Issuance
- Call center
- Walk-in cashiering
- Secondary collections
- Permit management
- Full, turnkey operation

Milwaukee operates one of the most sophisticated parking citation processing operations in the U.S. Since May 1998, Duncan has provided Milwaukee with a full, turnkey solution for citation processing, secondary collections, boot/tow support, and the provision of enforcement technology. This includes all related software and hardware and the operation of a system (Duncan's AutoPROCESS) network with more than 150 touch points across the City. Our ongoing customer satisfaction is measured and maintained through the following channels:

- Timely production of contract deliverables (invoicing with supporting statistical reports)
- Collection performance (percent of citations paid is ≥ 85%)
- Customer service (average time to answer is less than 30 seconds)
- Timely response to public inquiries and open records requests (information and supporting reports provided before deadline)

During our partnership with Milwaukee, we have assisted the City in reengineering its parking enforcement activities and have added several new features to increase the value of the parking management system. These include:

- The integration of the City's night parking permit system to AutoPROCESS;
- Expansion of the number of locations where permits may be purchased;
- Set up and implementation of payment kiosks at numerous key locations, enabling customers to purchase parking permits and/or pay parking citations at ATM-type devices;
- Integration with the City's multi-space meter system;
- Enhancement of the AutoPROCESS boot/tow module;
- Addition of a customer-designed program to support selling unclaimed vehicles at bid;
- Integration with the City's License Plate Recognition (LPR) system; and
- The implementation of a state-authorized Tax Refund Intercept Program (TRIP) that has generated over $33.5M since 2003.

CITY OF SAN DIEGO, CALIFORNIA

Contact Name	Jonathan Carey
Title	Parking Program Manager
Agency	Office of the City Treasurer
Phone	619-533-3610
Fax	619-533-3131
Email	jcarey@sandiego.gov
Address	Plaza Hall, 202 C Street, San Diego, CA 92101
Contract Dates	Original contract start: 04/2007 Current contract: 11/2016-11/2021
Years of Service	12

Current contract represents our 3rd consecutive award by the City.

Agency testimony : January 20, 2017

"The City of San Diego Parking Administration Program would recommend Duncan for citation processing services. We have consistent resources that are familiar with our specific business processes and needs. The technical team in particular is knowledgeable and professional. Duncan is willing to work together with City staff to address any issue and is open to new ideas and enhancements. We look forward to our continued partnership."

- *Jonathan Carey, Parking Program Manager, City of San Diego*

Brief overview

Under the current agreement with the City, Duncan has added several technology enhancements, building on a strong program foundation to make the City of San Diego one of the most innovative programs in the country. A few highlights from the list of enhancements include:

- A web-based permit processing and fulfillment application;
- A customer account management portal (MyPortal);
- Integration with the City's SAP system;
- Integration with the City's recently acquired GE Smart lighting system – allowing the City's light poles to be used as a true parking management asset;
- Online administrative hearings requests and scheduling; and
- A comprehensive fleet management application.

Duncan met all scheduled implementation requirements on time.

Work performed

- Citation issuance software and hardware
- Citation processing, including manual citation data entry with rejected citation workflow
- Printing and mailing services
- In-state and out-of-state registered owner acquisition
- Internet and IVR payment processing
- Document management and workflow
- Over-the-counter payment processing (cashiering)
- Lockbox payment processing
- Online adjudication and document management and workflow
- Online permit application, purchase and fulfillment
- MyPortal, customer account management website

- Online citation status review
- Interface with City's general ledger
- Interface with City's secondary collections system

CivicSmart overview

The City of San Diego has been a CivicSmart handheld client since 1986 and a Duncan Solutions citation processing client since 2007. Since 2007, the City has twice selected Duncan Solutions to continue to provide citation-processing services and has twice upgraded their CivicSmart handheld enforcement hardware and software.

In April 2017, the City Treasury Department looked to further upgrade their enforcement system and chose the advanced AutoISSUE enforcement software installed on Samsung Galaxy S7 devices and integrated with the Zebra ZQ510 printer. The devices are 3G/4G capable and feature a 12 MP camera. With real-time wireless integration, AutoISSUE allows the City of San Diego to use features such as:

- Blank license plate reason recording
- Fine surcharge reporting
- Real-time stolen vehicle/hot-sheet look-up
- GPS data capture
- Parking Enterprise Management System (PEMS) reporting
- Wireless citation upload

The City's Street Sweeping Department recently upgraded to the AutoISSUE software on the 15 Galaxy S7 devices.

CITY OF MIAMI, FLORIDA

Contact Name	John Suarez
Title	Court's Project Manager
Agency	Miami-Dade Parking Violations Bureau
Phone	305-496-2196
Fax	N/A
Email	johns@miamidade.gov
Address	175 NW 1st Avenue, 12th Floor, Miami, FL 33128
Contract Dates	1993 – Present

Brief overview:
The County of Miami-Dade has been a handheld client since 1993. Over the years, the County has continued to upgrade their handheld enforcement devices with Duncan Parking Technologies as technology has evolved and advanced. In 2016, began an enhancement to our Android-based AutoISSUE platform.

The County has a unique program, administering handheld enforcement devices for 8 different agencies spread geographically across the county. Each agency requires its own host computer and instance of AutoISSUE for recharging and managing devices and data.

Services provided:

- DMV registered owner lookup services
- Citation issuance software provided by ***CivicSmart***
- Citation issuance hardware (handheld devices, related equipment, and consumables)
- Handheld License Plate Recognition (LPR)
- Boot and tow tracking
- Habitual violator list and automated reports
- Delinquent secondary collections

The Miami Parking Authority business intelligence and data management overview

a. **Business intelligence and data management:** The Miami Parking Authority hired Smarking in 2015 for a three-year contract and renewed the contract in 2018 for another three years. In Miami, Smarking has aggregated data from more than six unique sources including: SKIDATA (PARCS), CTR (PARCS owned by HUB) Parkeon (now Flowbird), PaybyPhone, T2, and Smart Parking (parking sensors). The data is leveraged to streamline operational efficiency and implement variable pricing programs to improve parking availability and mitigate congestion.
b. **Meter and pay station removal – land use:** The City uses Smarking to measure mobile payment adoption vs. meter usage and remove meters in areas with high mobile payment adoption and low meter usage, reducing street clutter. The City also selectively removes parking spaces in areas of low utilization to allow for parklets and bike lanes.
c. **Inventory allocation:** Miami is a dense and growing city, and parking occupancies in the Authority's parking structures are closely monitored. The city leverages the Smarking oversell analysis tool to optimize the allocation of monthly parkers across their structures, increasing revenue for the City and providing more parking options for Miami residents.
d. **Mapping:** In renewing the relationship with Smarking in 2018, the City elected to purchase a dynamic mapping application to help communicate parking occupancies and pricing to interested stakeholders. The mapping application is a key element of the City's plan to implement variable on-street pricing, using the tool to clearly communicate pricing and availability across streets, structures, and neighborhoods. The City also plans to host the map publicly on its website to promote civic transparency and advertise the City's technology to third parties looking to partner on innovative and connected mobility strategies.

CITY OF ATLANTA, GEORGIA

Contact Name	Jason Sutton
Title	Regional Manager
Agency	SP+ Municipal Services
Phone	(678) 996-5771
Email	jsutton@spplus.com
Address	150 Garnett St. SW, Atlanta GA 30303
Contract Dates	11/2009-Current

Brief Overview:

Duncan Solutions provides a comprehensive on-street parking enforcement and back-office processing system to efficiently service the City of Atlanta's on-street parking concession contract operated by Standard Parking. Under this full service contract, Duncan supplies all hardware, technology, and services required to manage the 200,000+ parking citations each year from the time of issuance all the way to secondary collections. This turnkey solution has been highly advantageous for both the City of Atlanta as well as Standard Parking, allowing each party to direct attention to running onsite operations, while leaving the back-office software and support to us.

Services Provided:

- Data Conversion
- Citation Issuance Software and Hardware provided by ***CivicSmart***
- Citation Processing
- DMV Registered Owner Lookup Services
- Noticing
- Customer Service
- Dispatch Services
- Adjudication Support, including Online Adjudication options
- Delinquent Collections
- Payment Services (Lockbox, OTC, Web. IVR)

LIST OF INSTALLATIONS

Client Name	Type of Client (Parking, Municipal, Tolling)	Scope	Year of Install	Contact Information
407 ETR Concession Company	Tolling	Collections Only	2018	Karina Luquetti kluquett@407etr.com
Alexandria, VA	Parking	Enforcement, Processing & Collections	2016	Paulino Lazo Paulino.Lazo@alexandriava.gov
American Traffic Solutions	Red Light	Collections Only	2014	Quynhchi Vu-shumway Quynhchi.vushumway@verramobility.com
Atlanta, GA	Parking	Enforcement, Processing & Collections	2016	Jason Sutton jsutton@spplus.com
Atlantic City, NJ	Municipal	Collections Only	2015	Gina Holmes gina.holmes@njcourts.gov
Bayonne, NJ	Municipal	Collections Only	2014	Genny Michane gmichane@aol.com
Bridgeton, NJ	Municipal	Collections Only	2018	Marie Keith marie.keith@njcourts.gov
Cameron County Regional Mobility Authority	Tolling	Collections Only	2017	Adrian Rincones arincones@ccrma.org
Chicago Skyway, IL	Tolling	Collections Only	2017	Luis Sererols lsererols@chicagoskyway.org
Delaware Department of Transportation	Tolling	Collections Only	2014	Jon Osborne Jon.osborne@delaware.org
Detroit, MI	Parking	Enforcement, Processing, and Collections	2016	James Canty cantj@detroitmi.gov
Dulles Greenway	Tolling	Collections Only	2016	Terry Hoffman Thoffman@dullesgreenway.com
Durango, CO	Parking	Enforcement & Processing	2014	Wade Moore wade.moore@durangogov.org
East Cleveland Municipal Court, OH	Red Light	Collections Only	2019	Charles Iyahen ciyahen@eastcleveland.org
Elizabeth, NJ	Municipal	Collections Only	2018	Teri Estrada testrada@elizabethnj.org
Georgia State Road & Tolling Authority	Tolling	Collections Only	2014	Cris Sanders csanders@georgiatolls.com
Glendale, CA	Parking	Enforcement, Processing, Permits & Collections	2014	Tad Dombroski tdombroski@glendaleca.gov
Globalivia-Pocahontas Parkway, VA	Tolling	Collections Only	2017	Antonio Moreno amorenoc@globalvia.com
Gloucester City, NJ	Municipal	Collections Only	2014	Donna Florich donna.florich@njcourts.gov
Greenburgh, NY	Parking	Enforcement, Processing & Collections	2015	Annu Jacob ajacob@greenburghny.com
Houston, TX	Parking	Collections	2014	Maria Irshad Maria.Irshad@houstontx.gov
Hyattsville, MD	Parking	Processing & Collections	2016	Chris Giunta cgiunta@hyattsville.org
Illinois Tollway, IL	Tolling	Collections Only	2015	Greg Grier ggrier@getipass.com
Little Rock, AR	Parking	Enforcement, Processing & Collections	2018	Marvin Benton mbenton@littlerock,gov
Los Angeles County Metropolitan Authority	Tolling	Collections Only	2019	Michel'le' Davis davismi@lametro.net
Maplewood, NJ	Municipal	Collections Only	2017	Ryan Bancroft ryanb@twp.maplewood.nj.us
Miami-Dade County, FL	Parking	Enforcement and Processing	2016	John Suarez

				JohnS@miamidade.gov
Millville, NJ	Municipal	Collections Only	2014	Kim Hamlyn Kimberly.Hamlyn@millvillenj.gov
New Orleans, LA	Parking	Enforcement, Processing, Permits, and Collections	2014	Enrico Sterling ejsterling@nola.gov
NJ Turnpike, NJ	Tolling	Collections Only	2015	Carlos Caraballo Carlos.caraballo@conduent.com
North Texas Tollway	Tolling	Collections Only	2019	Kevin Banks kbanks@ntta.org
Nyack, NY	Parking	Enforcement, Processing & Collections	2014	Rosa Martinez deputy@nyack-ny.gov
Palo Alto, CA	Parking	Enforcement, Processing, Permits & Collections	2018	Mark Hur Mark.Hur@CityofPaloAlto.org
Paramus, NJ	Municipal	Collections Only	2014	Cynthia Holmes cholmes@paramusborough.org
Paterson, NJ	Municipal	Collections Only	2016	Manuel Quiles mquiles@patersonnj.gov
Penns Grove, NJ	Municipal	Collections Only	2017	Sharon O'Brien Bye Sharon.bye1@njcourts
Pennsylvania Turnpike, PA	Tolling	Collections Only	2016	Laura Quick lquick@paturnpike.com
Pine Hill, NJ	Municipal	Collections Only	2018	Barbara Heriegel Barbara.Heriegel@njcourts.gov
Pittsburgh, PA	Parking	Enforcement, Processing, and Collections	2015	David G. Onorato donorato@pittsburghparking.com
Port of Hood River, OR	Parking	Enforcement, Processing & Collections	2018	Fred Kowell fkowell@portofhoodriver.com
Rochester, MN	Parking	Enforcement & Processing	2015	Tony Knauer tknauer@rochestermn.gov
San Diego, CA	Parking	Enforcement & Processing	2015	Jonathan Carey jcarey@sandiego.gov
Shorewood, WI	Parking	Enforcement, Processing & Collections	2014	Diane DeWint-Hall dhall@villageofshorewood.org
Somerville, MA	Parking	Collections Only	2017	Suzanne Rinfret srinfret@somervillema.gov
Union City, NJ	Municipal	Collections Only	2015	Gus Schlaier Gustav.Schlaier@njcourts.gov
Union Township, NJ	Municipal	Collections Only	2016	Pat Nasta PNasta@uniontownship.com
Virginia Department of Transportation (VDOT)	Tolling	Collections Only	2018	David Caudill David.caudill@vdot.virginia.gov
Wayne Township, NJ	Municipal	Collections Only	2016	Lori Ellicott ellicottl@waynetownship.com
Washington, DC	Parking	Collections	2013	Alice Cooke Alice.cooke@dc.gov
Corpus Christi, TX	Parking	Enforcement, Processing, and Collections	2017	Raymond Baron raymondb@cctexas.com

4. COST

Indicate proposed per meter base unit and describe all costs of options not included in the base price in a separately sealed envelope.

All proposed cost information can be found in our Cost Proposal, which has been provided in a separately sealed envelope.

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5. INSURANCE

If applicable, indicate proposed insurance coverage for the project.

Duncan proposes General Liability, Errors & Omissions, Automobile, Cyber, and Crime insurance coverage in amounts appropriate under the final award and contract as well as workers compensation insurance coverage in compliance with State of Missouri requirements. All such insurance shall be provided in a form reasonably required by the City including the City as additional insured with waiver of subrogation. Generally, our coverage includes:

- Worker's compensation and employers' liability up to $1,000,000
- General liability up to $2,000,000
- Automobile liability up to $1,000,000
- Professional liability up to $10,000,000
- Cyber up to $10,000,000

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6. APPENDICES

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APPENDIX A – SCOPE OF SERVICES

Appendix A – Scope of Services follows.

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Appendix A

Scope of Services

Requirements are identified as to their priority by:

1 Required
2 Desired

Respond to each item as to whether your proposed system satisfies the requirement:

Fully Provided - The item is satisfied with standard functionality in the proposed system

Modification Required - The item is satisfied with modification to the proposed system. Include the cost for the modification in the Comment column and also include the cost in your price proposal.

Not Provided - The item is not supported by the proposed system and modification is not available.

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
A. GENERAL REQUIREMENTS						
A 1	The Parking Management application must be browser based, supported by all popular browsers.	1	X			Duncan's AutoPROCESS solution runs on windows-based servers located in our processing centers, thereby allowing Duncan to operate as an Applications Services Provider (ASP). STLTO will benefit from the responsiveness and uptime of AutoPROCESS, which is a fully hosted system that is maintained by Duncan and securely accessed by STLTO via the Internet. It can be accessed through most standard web browsers (ex. Chrome, Internet Explorer, Firefox). This model allows us to ensure complete data security and load balancing, while leveraging the power of our AutoPROCESS system and Oracle database management system to provide a cost-effective, state-of-the art solution configuration.
A 2	The application must be Responsive and format display consistent with the type device used. Examples of the application display from a desktop, tablet and phone must be included with the proposal. **Denote the location of the examples in the comment.**	1	X			Whether visiting on a desktop, tablet, or smart phone, Duncan's customer account portal is configured for easy viewing; however, the AutoPROCESS application screens are not configured to be viewable via mobile device due to the amount of data required to be displayed and the data security concerns associated with displaying our application on an unsecured device. **We have provided examples of the application display within our proposal response in Section 1. Scope of Services, subsection 1.3B Functionality.**
A 3	System must employ a fully relational database that allows data to be manipulated, linked, and queried.	1	X			
A 4	System must be available for use with Oracle, and MS SQL databases	1			X	Duncan's proposed systems are currently only available for use with the Oracle database.
A 5	System must be able to be hosted by the software provider or self-hosted	1	X			AutoPROCESS is fully hosted by Duncan Solutions, so STLTO can benefit from over 99% uptime and high system responsiveness.
A 6	Tasks and activities must be easily initiated via context-sensitive menus.	1	X			
A 7	All information must be accessible and editable from one single screen	1	X			
A 8	System tasks must be scheduled to run automatically at user-defined intervals.	1	X			
A 9	System must be capable of interaction with external relational databases with real time and/or batch processes.	1	X			Due to security requirements, all interactions with external databases will take place with web services for real-time interaction or through batch file exchanges.
A 10	Record searches that result in a single record meeting the search criteria must automatically open that record.		X			
A 11	Record searches that result in multiple records meeting the search criteria must display the matching records in a grid that:					
A 11a	Displays the qualifying records with additional identifying information	1	X			
A 11b	Allows the user to sort the records in the grid by the values in any column (ascending or descending)	1		X		This feature currently does not exist within AutoPROCESS; however, we can create this function for STLTO during the implementation phase.
A 11c	Allows the user to reorder the sequence of the columns in the grid, saving their individual preference for each individual grid type.	1		X		
A 11d	Directly navigates to any selected record in the grid.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
A 11e	Provides the ability navigate to a record, while maintaining the results grid that can be returned to for selection of another record.	1	X			
B. USER SECURITY/CONTROL REQUIREMENTS						
B 1	System must allow for a wide range of user security and control.	1	X			We have provided further detail regarding our user security and control in **Section 1. Scope of Services, subsection 1.3B Functionality.**
B 2	System must have the capability to optionally enforce strong passwords and password expiration	1	X			
B 3	System must have the capability for the end-user to login and authenticate via a third-party system (LDAP, Active Directory or similar)	1			X	
B 4	System must automatically log a user off after a predetermined amount of time without activity.	1	X			
B 5	The system must allow the creation of a profile for each individual user. This profile specifically details the rights and privileges as defined by the system administrator.	1	X			Users that require access to system capabilities are assigned a "user profile" which defines the modules and the specific functions within a module that the user can access. The authorized users are then assigned unique User Ids/identification numbers and passwords. A user may be granted authority to view certain data but not to edit or otherwise manipulate that data. Varying levels of access are also definable via our enforcement solution to disable or enable specific functions. Our password programs and our built-in flexible authorization configuration processes allow us to configure user's profiles to ensure that this policy is adhered to for our information systems.
B 6	Rights and privileges must be configurable per screen and range from read-only to full supervisor permissions.	1	X			
B 7	Ability to clone user profiles must exist.	1	X			
B 8	The system must contain an audit trail of modifications and/or transactions executed by a particular user. Transactions must be date, user and terminal stamped.	1	X			Duncan's AutoPROCESS system records full audit trails of all actions taken within the system (payments, dispositions, date edits, correspondence, notices, etc.). The system captures the date/time stamp, user, and terminal ID for every transaction as well as the details of the transaction. The details captured include the value of each data element before the transaction and the value after the transaction. A full record of actions taken on a particular ticket, including the audit trail information, can be viewed online by authorized users and printed as required.
C. CITATION MANAGEMENT REQUIREMENTS						
C 1	All features below must be initiated from a single screen.	1	X			
C 2	Entry (via keyboard entry and/or automatic real-time upload via handheld citation issuance devices), viewing, and printing citations. All information normally associated with a specific citation such as: Ticket #, Plate #/Yr./State (or Province), Plate Type, Meter #, Date Issued, Time Issued, Officer Badge, Location, Infraction, Vehicle Info. (Make, Model, Color), VIN #, Public and Private comments must be entered and viewed on a single screen.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
C 3	Detailed violation information including fine structure (base amount, uplifts, accumulations, late fees, discounts, etc.) must be viewable on screen.	1	X			
C 4	System must include the ability to add notes field (including date of the note, note type, and comments). Notes must be date/time, user and terminal ID stamped.	1	X			Authorized users can enter or view Administrative Review notes at any step in the process. All notes are listed in chronological order and can be viewed by anyone who has Inquiry privileges.
C 5	System must display detailed status information regarding balance due, addition of late fees and fine increments, administrative holds, and adjustments.	1	X			
C 6	System must allow application of skeletal payments for citations not currently in the system (citations paid off the windshield).	0	X			To facilitate uninterrupted over-the-counter payment processing, the AutoPROCESS system has been designed to accept payments on citations that have not yet been entered into the system. While this situation will become increasing rare with real-time citation upload via the electronic issuance devices, handwritten citation may still result in an occasional occurrence. Configured to work for citations issued both manually and electronically, AutoPROCESS is configured to automatically sync skeletal records with the underlying citation following entry into the database—resulting in worry-free skeletal payment entry when required.
C 7	System must track all changes and adjustments made to a citation to a specific individual, date and time using a ticket tracker.	1	X			
C 8	System must display the complete history of transactions associated with the citation without exiting the screen.	1	X			
C 9	System must allow for the monetary amount of a citation to be adjusted.	0	X			AutoPROCESS gives authorized Authority users the ability for STLTO staff to make adjustment transactions including waived amounts, voided citations, dismissed citations, late fee “roll back”, returned checks and refunds. This includes reversing, modifying, and adjusting payment amounts to close or reopen a citation, as applicable. AutoPROCESS will allow authorized users to extend due dates, including the “rolling back” of late fees. The system will process the citation under the revised due date and amount, while retaining a record of the original due date and amounts.
C 10	Vehicle, hearing, receipts, notes/attachments, and pre-paid citation data must all be viewable from the citation record.	1	X			
C 11	The attachment of scanned documentation, digital images, voice memos and/or other electronic items to the citation must be supported.	1	X			
C 12	Attachments must be date, user and terminal stamped.	1		X		Currently, we only stamp image uploads by date and user; however, we can add this functionality during the implementation phase.
C 13	A visual indicator must display on records with attachments, hearing schedules or warning codes.	1	X			
C 14	Hearing information must be directly accessed from the citation record.	1	X			
C 15	Receipt (payment) information must be displayed directly on the citation screen.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
C 16	Payments must be able to be posted directly on the citation screen, without the need to open a separate cashiering module or add items to a shopping cart.	1	X			
C 17	A mechanism for rapid and convenient entry of hand-written citations utilizing defaults from the previously entered citation such as date, officer number, location, etc must be provided.	1	X			We process handwritten citations and ensure their accurate entry into the automated citation processing system. Our approach to entering data from tickets issued by hand is unique because data entry for those tickets is from images rather than from the paper documents. This solution enables us to deliver the following benefits to our clients: • Increased control over documents • More efficient processing of documents that may require exception processing • Greater access and improved responsiveness to copies of manual tickets • Reduced storage requirements for paper documents (if desired) Because the entry process is done through automation, there is no need to carry over the defaults from previously entered tickets; however, we can implement this feature during the implementation phase if that is the City's preference.
C 18	Full data edit and delete capabilities must be restricted to authorized users.	1	X			All authorized users are assigned unique User IDs/identification numbers for AutoPROCESS. Access to the system and any data stored therein, including registered owner data, is User ID and Password controlled. As is the case in all Duncan projects, users that require access are assigned a “user profile” which defines the modules and the specific functions within a module that the user can access. Also, a user may be granted authority to view certain data but not to edit or otherwise manipulate that data.
C 19	The system must have the capability to reassign citations to a different customer (ex. from vehicle leasing company to vehicle lessor).	1	X			
C 20	Scofflaws rules must be defined, tracked and downloaded to handheld enforcement units. Scofflaw criteria may consist of number of tickets issued, number of unpaid tickets, and number of tickets issued or unpaid within a defined date range, or number of tickets issued/unpaid related to a specified violation code.	1	X			Scofflaw eligibility status is viewable online from the Main Inquiry Results screen in the AutoPROCESS system. Additionally, a scofflaw list can be printed from AutoPROCESS for analysis or distribution to parties who do not have any system access. This report lists vehicles eligible for boot or tow and shows pertinent information, such as the date, time and location of open parking violations for each vehicle and is a valuable tool for locating seizure eligible vehicles based on amount owed, address and issued dates.
C 21	Direct access to customer, vehicle, appeal and payment information must be provided from the citation screen.	1	X			
C 22	The system must include the ability for notification letters to be generated, printed and/or emailed, while maintaining an audit trail within the application. Direct access to letter history must be provided and a copy of the letter must be stored in the attachments section of the citation.	1	X			Once we’ve successfully identified the correct Registered Owner, we can begin noticing through our citation noticing process. Duncan will automatically generate various notices of unpaid citations using the AutoPROCESS system according to criteria specified by the STLTO. All notices generated from AutoPROCESS are laser printed to ensure legibility. Notice files are created based on a predetermined schedule, printed, and mailed the same business day. The mail date and the name and address of the party to whom the notice was mailed are recorded as a permanent entry to the citation record in AutoPROCESS.

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
C 23	System must have the ability for one or more violations per citation.	0	X			
C 24	System must support the definition of aggregate/escalated fine structure based on number of tickets issued within a user defined time period.	1	X			
C 25	Aggregate/escalated fine structure can be defined for any individual or combination of violations. Definition of multiple structures must also be supported.	1	X			
C 26	Aggregate/escalated fine violations must be automatically supported, to assess the correct escalated fine amount when the ticket is issued without any additional user input.	1	X			
C 27	System must be able to define whether a violation uses aggregate, discount or uplifts in any combination.	1	X			
C 28	Tickets with discounted fines must display the ticket with the normal/full fine amount, while any display of the ticket for payment (within the application or online) will show the discounted amount due until the discount period ends.	1	X			
C 29	The system automatically creates an adjustment record for the discount amount when ticket are paid at the discounted amount	1	X			
C 30	Financial information related to the citation must be accessible directly on screen. This includes payments, adjustments, late/fees, etc.	1	X			
C 31	Fine uplifts/late fees must be automatically assessed to citations meeting criteria without the user initiating the process.	1	X			
C 32	System must have the ability to setup custom business rules for consistent and efficient selection from a pick-list. This data includes officer badge ids, locations, violation codes, void codes, appeal codes, and vehicle descriptive data.	1	X			
C 33	System must be capable of generating custom letters directly from the citation screen.	1	X			
C 34	System must notify users if the ticket issue date is X amount of days past due.	1	X			
C 35	They system must support custom user-defined surcharges (different from late fees), which may be applied directly onscreen or automatically assessed.	1	X			
C 36	Ability to post payments to a citation without leaving the citation screen.	1	X			
C 37	Ability for authorized users to reopen a ticket without leaving the screen.	1	X			
C 38	Ability for authorized users to correct data entry errors directly on screen. This data includes ticket number, plate correction and plate ownership correction.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
C 39	Ability to group ticket violations under a "Bylaw".	1	X			
C 40	Ability to define precincts and group citation locations.	1	X			
C 41	Ability to setup “Automatic surcharges" (not late fees) based upon individual violation, or the ticket as a whole.	1	X			
C 42	Ability to assess a hold based upon number of issued or unpaid tickets and transfer holds to a third-party system.	1	X			
C 43	Ability to resend a specific ticket to DMV for lookup.	1	X			
D. CITATION APPEAL MANAGEMENT REQUIREMENTS						
D 1	The parking system must track the citation appeal and hearing process. When an appeal record is created (either in the software, or through the Internet), the information relating to a citation must be automatically copied into the appeal record as the citation number is entered. The appeals and hearings manager must include the ability to do all of the following.	1	X			Inherent in the citation processing lifecycle, a portion of violators will wish to contest citations issued by the STLTO. To administrate this process, Duncan provides a variety of appeal submission methods for motorists, including online, mail, phone, and over-the counter. Because adjudication rules and processes vary by agency, our Administrative Review, Hearings, and Scheduling module was designed to be extremely flexible. It can easily be modified to support individual client requirements. On an annual basis, our solution manages over 100,000 hearings.
D 2	Adjust ticket status based upon appeal status (e.g. Appeal Pending, Appeal Approved).	1	X			
D 3	Attach digital pictures, files or documents. Attachments must be date, user, and terminal stamped.	1		X		Currently, we only stamp image uploads by date and user; however, we can add this functionality during the implementation phase.
D 4	Adjust the citation's final amount due and keep track of all adjustments made to the record.	1	X			
D 5	Put citations on hold (no further accumulation of late fees or notices) while appeal is in process.	1	X			
D 6	Provide built-in court hearing schedule report.	1	X			
D 7	Define court schedule (including available dates, times, number of hearings, etc).	1	X			
D 8	Define court locations and hearing officers.	1	X			
D 9	Generate/print and/or e-mail appeal decisions and/or letters on demand for a single hearing or in batch for multiple hearings. The hearing/appeals manager must call up one of several user-defined letters in the database file, which includes information about the citation, customer and vehicle.	1		X		Currently, we do not do batch for multiple letters; however, we can add this functionality during the implementation phase.
D 10	Direct access to letter history must be provided as well as storing a copy of the letter in the history.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
D 11	An appeal decision code may be defined for the purpose of notifying customers of the reason why an appeal was upheld or denied. This information must be printed on appeal decision letters.	1	X			
D 12	Ability for a customer to appeal multiple citations at a single time.	1	X			
D 13	Ability to access financial information directly from the citation appeal record. This includes payments, adjustments, late/fees, appeal reductions, etc.	1	X			
D 14	Ability to define a court fee may and apply to an appealed citation.	1	X			
D 15	Ability to generate a packet containing a bar-coded facsimile of the ticket, detailed ticket history, customer history (number of tickets issued, financial records, outstanding balances, permits, vehicles, etc.), customer appeal history (previous appeal requests, reasons, and decisions), officer/office comments, and all attachments including correspondence and digital images without leaving the screen.	1		X		
D 16	Ability to view previously void/appealed tickets on screen.	1	X			
D 17	Reports for appealed tickets, fines reduced due to appeal, tickets pending appeal, appeal denied tickets, and hearing schedules must be provided	1	X			
D 18	Payments must be automatically credited to the ticket holder's account upon appeal approval.	1	X			
D 19	The user must be able to free form enter appeal requests, parking department recommendations, and appeal decisions.	1	X			
D 20	The user must be able to view citation, customer, and receipt records directly on screen.	1	X			
D 21	Ability to partially appeal a ticket is required.	1	X			
E.	**VEHICLE MANAGEMENT REQUIREMENTS**					
E 1	The parking management system must provide complete control of the vehicle registration process.	1	X			
E 2	All activity associated with a vehicle including owner information, citations, permits and warning codes must be viewable from a single screen.	1	X			
E 3	Ability for multiple vehicles to be associated with a single customer.	1	X			
E 4	Ability for vehicles to be manually assigned to a warning list (e.g. VIP, Scofflaw). Warnings must be sent to the handheld ticket writers.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
E 5	System must have the ability to manage and process DMV plate lookups.	1	X			Duncan is a leader in the acquisition of DMV Registered Owner data, which is essential to generating peak revenue from ticket processing and collections activities. Any effort to pursue delinquent parking ticket debt is contingent upon identifying the owner of the ticketed vehicle. For over 30 years, Duncan has worked with DMVs across the nation to quickly obtain RO name and address information for the operation of parking ticket processing programs. We accomplish this using both direct interfaces with all 51 DMVs (50 states and the District of Columbia) and five (5) Canadian provinces (where allowed by law) through a strategic partnership with the National Law Enforcement Telecommunication System (Nlets).
E 6	A history of vehicle ownership information must be maintained.	1	X			
E 7	The attachment of scanned documentation, digital images or other electronic items on the record must be supported.	1	X			
E 8	Attachments must be date, user and terminal stamped.	1		X		Currently, we only stamp image uploads by date and user; however, we can add this functionality during the implementation phase.
E 9	A visual indicator must display on records with attachments.	1	X			
E 10	Existing citations must be viewable on screen with the ability to click and swap to the detailed information.	1	X			
E 11	Existing permits must be viewable on screen with the ability to click and swap to the detailed information.	1	X			
E 12	Vehicles may be reassigned to a specific account along with any citation information.	1	X			
E 13	Plates may be edited or removed from a customer's account.	1	X			
E 14	Vehicles with unknown owner information must be exported for import to a plate lookup system. Likewise, owner information may be imported into parking system.	1	X			
E 15	Vehicle owner information may be manually entered.	1	X			
E 16	Warnings must be automatically generated. Criteria includes: number of tickets issued to a specific plate, number of "open" tickets assigned to a specific plate, number of either issued/open tickets that contain a specific violation, and/or any of the above criteria within a specific defined date range.	1	X			
E 17	Warning messages must be displayed in color for easy recognition.	1	X			
F.	**ACCOUNT/PAYMENT MANAGEMENT**					
F 1	System must provide the ability to view all activity associated with individuals and groups that park or are responsible for parking. Track contact information related to a customer including multiple addresses, phone numbers, and e-mail.	1	X			
F 2	Ticket/Vehicle Contact Information must be viewable on a single screen without scrolling.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
F 3	System must support a barcode reader, receipt printer and electronic cash drawer for a complete point of sale station.	1	X			
F 4	System must include the ability to post payments directly on the record's screen without opening a separate payment manager or utilizing a shopping cart.	1	X			
F 5	System must support entry of batch payments. The payment batch must remain open (through user log off and log on) for additional entries until the user initiates closing the batch.	1	X			
F 6	System must support automatic administration of a discounted fine amount for prompt payment received within a user defined time.	1	X			
F 7	System must utilize one unique account number issued to a customer and link all related records (citations, tow/boot entries, vehicles and fees) to the unique account.	1	X			This feature requires development; however, we can complete this during the implementation phase.
F 8	The Account record must display a consolidated view of all comments/notes recorded with any ticket, permit or vehicle associated with the account.	1		X		This feature requires development; however, we can complete this during the implementation phase.
F 9	The balance due, with detail, for totals based upon citations, permits and fees must be viewable directly on screen.	1	X			
F 10	Posting of payments for citations, permits, NSF and fees may be applied on one screen. Payments can be applied automatically (FIFO) or manually to specific items. Split payments must also be supported (ex. Payments in cash and check may be applied in one single transaction).	1	X			
F 11	All transactions must be tracked by cashier or cash drawer/terminal.	1	X			
F 12	Payments may be posted in full or partial. Credits from an existing customer balance may be applied.	1	X			The standard configuration of AutoPROCESS is to accept partial and full payments of fines and penalties; the system will allow a motorist to pay a single ticket or a subset of tickets selected from all open tickets for the motorist. The system can also be configured to apply partial payments first to the fines and fees due at STLTO's discretion. Notification of partial payments will be completed via the standard notice process.
F 13	A receipt may be printed/emailed as necessary that clearly identifies individual transactions and/or items purchased.	1	X			
F 14	User-defined payment methods must be supported and interface with third-party systems where applicable (i.e. cash, check, payroll deduction, credit card, interdepartmental check).	1	X	X		If required, interfaces with payroll deduction and/or interdepartmental check systems would need to be development during the implementation phases, allowing funds to credit balances appropriately.
F 15	System must support the entry of multiple payment methods (tender types) for payment within a single payment transaction.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
F 16	Fields for check number, credit card number, and authorization number or expiration date must be available.	1	X			For security purposes, we do not record full credit card numbers within AutoPROCESS.
F 17	A complete cash drawer closeout process must be included with a detailed reconciliation report.	1	X			
F 18	System must include the ability for receipts to be printed, emailed and reprinted/emailed on demand.	1	X			
F 19	A barcode may be printed on citations and scanned at point of sale to facilitate rapid data entry and lookup.	1	X			
F 20	System must support establishment and tracking of payment plans	1	X			
F 21	System must be able to process NSF checks, with assessment of an optional fee, and a flag may be placed on the account (flag must appear on any screen where a payment may be applied).	1	X			Our solution identifies and processes special bulk correspondence runs such as partially paid citations, NSF transactions, drive-away letters, administrative review/hearing letters, permit renewal notifications, and other conditions as agreed upon.
F 22	A summary, with direct access to all information and invoices associated with a customer must be viewable on one screen.	1	X			
F 23	System must contain the ability to apply overpayments to a customer account with a complete audit trail	1	X			
F 24	System must include the ability to generate user-defined customer statements in a variety of formats.	1	X			
F 25	Complete account history including all vehicles, citations, permits, fees and transactions on an account must be viewable, with the ability to print and/or email.	1	X			
F 26	System must include the ability for addresses to be defined as invalid. Accounts with invalid addresses should be removed from the billing queue and sent back to DMV for updated address information if requested.	1	X			
F 27	Potential duplicate customer records may be identified with the option to merge the duplicate records.	1	X			
F 28	Scanned documentation, digital images or other electronic items may be attached to the record.	1	X			
F 29	A visual indicator must display on records with attachments.	1	X			
F 30	Direct access to receipts (payments) associated with the customer must be available for viewing or printing.	1	X			
F 31	System must allow authorized users to issue refunds and credits to a customer.	1	X			
F 32	System must allow unlimited, user-defined unique ID numbers to be associated with one customer account.	1			X	The AutoPROCESS system does not support unliited; however, user-defined unique ID numbers can be associated with one account.
F 33	System must support custom messages added to an account that will pop up each time the account is called up on screen (account alert).	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
F 34	System must allow search by unique ID number, name, address, custom fields, citation, permit number, and plate number. Searches may be performed from any screen.	1		X		Currently, searches cannot be performed from any screen and are instead performed from the "citation inquiry menu".
G. INVOICING/LETTER GENERATION						
G 1	The system must be able to print and/or email a variety of invoices related to citations, and account data.	1	X			
G 2	The system should automatically attach sent correspondence to the pertinent record.	1	X			
G 3	The system must allow for setup of unlimited custom letters.	1	X			
G 4	The system must support sending letters to a group of people or individually	1		X		The AutoPROCESS system currently supports sending letters individually. Group functionality can be developed during the implementation phase.
G 5	The system must be configurable to automatically send batch produced correspondence via email if an email address exists, or otherwise print the correspondence for mailing.	1	X			
G 6	The system must generate notices, or billing letters, for overdue citations.	1	X			
G 7	The system must include the ability to generate billing letters based upon a variety of user-defined criteria.	1	X			
G 8	Letters may be printed on a standard printer directly connected to the workstation or accessed via a network	1	X			
G 9	Letters may be “rolled back” if generated in error.	1	X			
G 10	An audit trail exists to track all notification letters within the system	1	X			
G 11	Notices may be printed on letterhead.	1	X			
G 12	The system must have the capability of generating notices without user intervention via a task scheduler.	1	X			
G 13	System must be able to generate customer statements for mail or email	1	X			
G 14	Hearing notification letters/results may be generated for mailing or email.	1	X			
G 15	System must allow the user to define and create different types of letters specifically for on-demand generation from the record’s screen with the letter being stored on the account for future reference.	1		X		This feature is currently not supported and requires development.
G 16	System must send waiting list notification letters.	1	X			
G 17	System must be able to email a group of accounts custom letters.	1	X			
H. REPORTING						

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
H 1	The parking system must include several pre-defined reports concerning citation, account and financial information.	1	X			AutoPROCESS provides a powerful and comprehensive suite of standard reports for management review, analysis and decision support directly from the production database. Key information provided from our standard reporting suite include open citations, current balances, payments to date, hot sheet eligible vehicles, aged receivables, citations subject to hearings, and many more.
H 2	Reports must be selectable by date or date range, plus additional relative selection qualifiers.	1	X			
H 3	Standard reports support multiple levels of sorting based on a variety of variables.	1	X			
H 4	Reports must be exportable to common formats such as csv, xls, and pdf.	1	X			
H 5	The parking management system must include the ability to schedule reports to generate and automatically email to designated staff without user intervention.	1	X			
H 6	At a minimum, the system must include the following standard/canned reports. Denote any of these that are not included in the comments section, along with the cost to provide. - Account Balance Owing - Billing History - Fees - Overpayments - Refunds - Payments by Bank Account - Payment Plans - GL Revenue - Payments by Payment Type - Payments by Payment Origin - Payments by Cashier - Ticket Payments - Fee Payments - Violation Payment Amounts - Violation Payment Percentages - Voided Payment Reports - Appeal Results - Billed Tickets - Excessive Tickets on Customer Record - Hearing Schedules - Issued Tickets by Officer, Location, Violation and Status	1	X X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
	- Unpaid Tickets - Tickets without Owner Information - Ticket Aging Details - Voided Tickets by Badge and Location - Scofflaws					
H 7	The system must include a fully-integrated report designer for modification of standard reports. Modified reports must appear within the main reporting menu. Third-party software for generating reports (i.e. Crystal) must not be required.	1	X			Duncan's citation processing system includes a powerful, yet user-friendly and fully integrated, ad-hoc report writing tool that allows authorized users and project support staff to search and analyze data and create online reports as needed. These reports can be printed directly at a user's local or network printer. Unlike mainframe based citation processing and collection systems' reporting tools in which information is presented in rigid, pre-determined formats and custom reports that require additional programming, AutoPROCESS will allow STLTO authorized users to perform real-time queries of all the information in the production database, providing accurate, up-to-the-minute program information.
H 8	Vendor must supply a complete database dictionary.	1	X			
H 9	Reports must be accessible both from within the parking system and through a browser.	1	X			
I.	**CUSTOMER SELF-SERVICE PORTAL / E-COMMERCE**					
I 1	The parking system must include a customer self-service/e-commerce module for online ticket payments/appeals, account viewing, and secure online payments.	1	X			If awarded, Duncan will implement a customer account management function, called MyPortal, that can be accessed by logging into our secure site. Customers that want to establish an account simply provide an email address, vehicle license plate numbers and other user information. We then create and maintain an account that lists the customers' current ticket status, offers due date alerts for ticket payments, provides city alerts; etc. We've provided an example of the customer account website within our proposal response. MyPortal is a great customer service offering in addition to our other online portals; customers who prefer simply to make a payment can do so through our online payment site without setting up an account through the MyPortal system.
I 2	The e-commerce module must allow sign on through a single sign on portal, support Shibboleth, LDAP, Active Directory and other commonly used authentication methods.	1		X		
I 3	The e-commerce module must interface in real-time with the parking management software to enforce business rules and send requests/payments in real-time.	1	X			
I 4	The e-commerce module must redirect customers to a secure payment gateway for PCI compliant credit card payments.	1	X			
I 5	The e-commerce module must allow the customer to perform all of the following features	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
I 6	- View all current parking activity including contact information, citations, boot/tow, fees, and vehicles on one screen. - Pay entire account balance - Pay/Appeal Ticket - Upload attachments with appeal request - View tickets, including exact reprint, associated pictures, past billing statements	1	X			
I 7	The e-commerce module must allow departmental logins and self-service.	1	X			
I 8	The e-commerce module must be fully brandable to match the institution's branding rules.	1	X			
I 9	The e-commerce module must include a distinct configuration menu to allow parking administrators to activate/deactivate a variety of features.	1		x		
I 10	The e-commerce module must support business rules that restrict which violations may be appeals and/or paid online.	1	X			
I 11	The e-commerce module must generate, display and email receipts to the customer.	1	X			
I 12	The e-commerce module must support an automated customer inactivity timeout.	1	X			
I 13	The e-commerce module must operate over a secure network connection including SSL.	1	X			
I 14	The e-commerce module must include an interface for parking staff to view a real-time Dashboard	1		X		
I 15	The Dashboard must include all of the following widgets: - Current parking system users - Current e-commerce activity and server load - Graphs of Hourly and Daily e-commerce users - Issued tickets - Pending ticket voids - Unmatched skeletal payments - Appeal Requests	1	X			
I 16	The e-commerce module must support all commonly used brewers including Internet Explorer, Chrome, Firefox, Opera, and Safari	1	X			
I 17	The e-commerce site must automatically scale to support mobile and desktop browsers	1	X			
J. SYSTEM INTEGRATION/TASK AUTOMATION						
J 1	The system must be capable of transferring/importing customer, citation, permit, vehicle, tow, wait list, and financial information through data file imports and exports.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
J 2	The system must be capable of read/write ASCII and Unicode character sets	1	X			
J 3	The system must be able to read/write fixed, delimited CSV, SML, tape, and customized file formats.	1		X		Currently, our system supports read/write fixed, delimited CSV, SML, and customized file formats.
J 4	The system must include advanced configuration abilities for data field mapping, ordering, formatting and must be able to work with either file headers or footers.	1	X			
J 5	The system must be able to automatically backup, copy, move, delete and process data files for both import and export through a scriptable procedure.	1	X			
J 6	The system must be able to upload/download files to or from remote servers using network shares, mapped drives, FTP, sFTP and scp.	1	X			
J 7	The system must log all file transfers and report on job statuses by date range and/or process name.	1	X			
J 8	File transfers must include the following. Identify the availability of each file transfer type, indicating whether this is a standard interface or if programming is required in the comments column. Also include pricing for any of these within you pricing proposal.					
J 8a	- Demographic (person name, address, etc.) import/export	1	X			Standard interface
J 8b	- Citation import/export	1	X			Standard interface
J 8c	- Vehicle import/export	1	X			Standard interface
J 8d	- Payment import/export	1	X			Standard interface
J 8e	- General Ledger interface	1	X			Standard interface
J 8f	- Collection Agency Export and Import	1	X			Standard interface
J 8g	- Cashiering System Export and Payment import	2	X			Standard interface
J 8h	- Registered Owner Lookup	1	X			Standard interface
J 8i	- DMV Registration Hold, if supported by state	1	X			Standard interface
J 9	The system should be capable of real-time integration with other software systems	2	X			As the parking industry's only true end-to-end systems integrator, our solution is designed with seamless interfaces connecting all major solution modules.
J 10	The system should be capable or real-time integration through web services, stored procedures, tables and views	2			X	The proposed system is only capable of real-time integration through web-services.
J 11	The system must include a task scheduler for automation of all system processes, including, but not limited to: - Fine escalations - Bill/Invoice Generation - All file transfers	1	X			
J 12	The task scheduler must allow scheduling by date, day of the week or time	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
J 13	The task scheduler must run unattended on the server without an operating system user logged in.	1	X			
J 14	Input and output of tasks must support any of the following: ASCII, API, stored procedure, network share, ftp site	1			X	Currently, we do not support network shares, and stored procedures in connection with external entities.
J 15	The task scheduler must log process activity and display warnings and errors.	1	X			
J 16	The task scheduler must be capable of emailing process logs and activity to multiple email addresses	1	X			
J 17	The task scheduler must allow configuration by process (distinct schedules per job)	1	X			
K. ENFORCEMENT SOFTWARE/EQUIPMENT						
K 1	This proposal must include an Android Enforcement app, operating on the smartphone or tablet of our choice, including Bluetooth printer for all enforcement activities.	1	X			
K 2	The Agency must be able to procure the smartphone/tablet from the carrier of our choice	1	X			
K 3	The Enforcement App must communicate in real-time with the parking software via WiFi and/or Cellular networks	1	X			
K 4	The Enforcement app must include the following functionality. Denote any function not supported in the comments.	1	X			
	- Citation issuance - Ability to capture unlimited, high resolution color pictures with a single ticket - Ability to record unlimited voice memos with a single ticket - Permit searching - Vehicle Searching - Electronic Tire Chalking shared across all enforcement devices in real-time - Boot/Tow recording and tracking	1	X			
K 5	The Enforcement app must send citations to the parking system upon print, including any pictures or recorded voice memos.	1	X			
K 6	The Enforcement App must send boot/tow information in real-time.	1	X			
K 7	The Enforcement App must search vehicles in real-time against the database.	1	X			
K 8	The Enforcement App must track the enforcement officer's GPS path and display this on a map within the parking software	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
K 9	Tickets issued from the Enforcement App must display the GPS coordinates on a map, directly on the citation screen	1	X			
K 10	Pre-selected information, including violation codes, makes/models, and other data collection fields must be sent to the Enforcement App via WiFi or cellular network for batch backup	1	X			
K 11	The Enforcement App must require a valid Badge ID an optional password for log-in	1	X			
K 12	The Enforcement App must be menu operated for ease of use	1	X			
K 13	The Enforcement App must support both touchscreen and voice data entry	1	X			
K 14	The Enforcement App must track issuer productivity	1	X			
K 15	The Enforcement App must allow reprint of a citation	1	X			
K 16	The Enforcement App must allow authorized enforcement staff to void tickets in the field	1	X			
K 17	The Enforcement App must allow the issuer to review tickets issued within the shift	1	X			
K 18	The Enforcement App must search the parking database in real-time upon entry of a vehicle and display outstanding balance, vehicle warnings (boot/tow eligible, VIP, repeat offender, etc), and all permit information include type, expiration date, parking location, status and associated vehicles	1	X			
K 19	The Enforcement App must automatically assign multiple levels of escalated fine amounts based on user defined parameters.	1	X			
K 20	The Enforcement App must include barcode scanning technology for scanning of bar-coded registration stickers or permits.	1	X			The quality of the barcode read will depend on the scanner selected.
K 21	The Enforcement App must be capable of printing a QR code on the ticket so that customers can immediately pay the ticket online via their smartphone	1	X			QR Code printing is available with CivicSmart's two-piece hardware solution. The printer in the N5Z1 does not support QR printing.
K 22	Violation tables must be stored in the Enforcement App for selection by the issuer. Up to three violations may be selected for each citation.	1	X			
K 23	Late fee amount must be automatically added to violation(s) amount and the total displayed as the amount due if ticket is not paid by the date (displayed) the late fee would be assessed.	1	X			
K 24	The Enforcement App must automatically assess the correct escalated fine amount based on the parameters established for the violation, without any additional input by the enforcement officer.	1	X			

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
K 25	The issuer must be able to review tickets written for the date or date range from the Enforcement App.	1	X			
K 26	Multiple user-defined warnings (tow lists, scofflaw, VIP, etc.) must be stored in the Enforcement App and accessed real-time from the parking management system. Should one of these plates be entered, the issuer is immediately notified on screen and audibly.					
K 27	Additional warnings, previously determined by the Administrator in the system, must also appear upon entry of a plate number associated with that particular warning.	1	X			
K 28	Data must be selected from user-defined tables to prevent incorrect entry and reduce keystrokes (e.g. a violation code not within the established table cannot be entered).	1	X			
K 29	The Enforcement App must support both public and private comment codes and free-form comments. Public comments are to be printed on the citation; private comments are to be stored within the parking system for parking department viewing.	1	X			
K 30	The Enforcement App must communicate in real-time with the parking management system's application server. Cradles and "host communication PCs" must not be necessary to sync data.	1	X			
L. ENFORCEMENT API						
L 1	The system must have an API that facilitates real-time communication between the Enforcement App in the field and Pay-by-Plate, Pay-by Space, Meter and LPR Systems.	1	X			AutoISSUE's robust integration engine integrates with dozens of parking systems.
L 2	The API must be capable of communication to a variety of third-party companies for pay-by-phone integration to gather real-time pay-by-phone parking information.	1	X			AutoISSUE already interfaces with ParkMobile, Passport, Pango, Pay By Phone, and Mobile Now.
L 3	The API must be capable of communication with a variety of Meter manufacturers to gather real-time meter information.	1	X			AutoISSUE already integrates with Parkeon, Cale, Digital/T2, Global and CivicSmart meters.
L 4	The API must be capable of communication with a variety of LPR systems for real-time display of LPR hits on the Enforcement App.	1	X			AutoISSUE already interfaces with Genetec and Vigilant LPR Systems.
L 5	The API must be capable of displaying LPR hits for boot/tow vehicles, overtime parking, and permit verification.	1	X			AutoISSUE already supports this feature.
L 6	The API must populate a listing of vehicles that have purchased parking via pay-by-phone systems. The listing must be color-coded to indicate valid plates/spaces, plates/spaces that are due to expire, and expired plates/spaces. The enforcement officer must be able to initiate the ticket issuance process directly from this list.	1	X			AutoISSUE already supports this feature.

REQUIREMENT		Priority	Fully Provided	Modification Required	Not Provided	Comment
L 7	The Enforcement API must populate a listing of vehicle hits send in real-time from the LPR system. The enforcement officer must have the ability to issue a citation directly from this screen.	1	X			AutoISSUE already supports this feature.
M.	**OPTIONAL LPR ENFORCEMENT SYSTEM**					
M 1	Vendor must offer an LPR enforcement option consisting of mobile or fixed LPR cameras and processing software from a leading, widely installed manufacturer	1	X			AutoISSUE includes an LPR engine in the handheld software to automatically read plates.
M 2	Vendor must directly provide the LPR equipment installation and on-going support for the LPR system.	1	X			
M 3	Vendor application must interact with the LPR Mobile system real-time to provide permit, paid time (meter / pay by phone), and vehicle warning information.	1	X			
M 4	Vendor must configure the LPR system with geo-fence zones and the related enforcement for the zone (permit types) to support automatic selection by the mobile LPR as it enters the zones.	1	X			
M 5	Vendor must provide direct integration between the mobile LPR software and their ticketing function on the same LPR vehicle computer with an automated and seamless process.	1	X			
M 6	LPR system must also send LPR enforcement hits real time to the vendor handheld enforcement devices, with a map display of the violation location.	1	X			
M 7	All LPR data read (details including date/time, gps coordinates, license information, and both license plate and context images) must be integrated into the Vendors ticket management database..	1	X			
M 8	LPR Reads will be identified in the database by their status of either READ, HIT (by type), or TICKETED	1	X			
M 9	Tickets issued as a result of an LPR Hit will have the read details and images attached to and viewable directly from the ticket display.	1	X			
M 10	Vendor application must include standard reporting, and map and graphical analytics of the LPR data.	1	X			

AUDITED FINANCIAL STATEMENTS

Three years of audited financial statements follows. These include 2018, 2017, and 2016. Each of our financials includes an auditor's statement.

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CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Navient Corporation:

We have audited Navient Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of December 31, 2016 and 2015, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016, and our report dated February 24, 2017 expressed an unqualified opinion on those consolidated financial statements.

(signed) KPMG LLP

McLean, Virginia
February 24, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Navient Corporation:

We have audited the accompanying consolidated balance sheets of Navient Corporation and subsidiaries (the Company) as of December 31, 2016 and 2015, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2016 and 2015, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 24, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

(signed) KPMG LLP

McLean, Virginia
February 24, 2017

NAVIENT CORPORATION

CONSOLIDATED BALANCE SHEETS
(In millions, except per share amounts)

	December 31, 2016	December 31, 2015
Assets		
FFELP Loans (net of allowance for losses of $67 and $78, respectively)	$ 87,730	$ 96,402
Private Education Loans (net of allowance for losses of $1,351 and $1,471, respectively)	23,340	26,394
Investments		
Available-for-sale	3	5
Other	347	496
Total investments	350	501
Cash and cash equivalents	1,253	1,594
Restricted cash and investments	3,600	3,738
Goodwill and acquired intangible assets, net	670	705
Other assets	4,193	4,712
Total assets	$121,136	$134,046
Liabilities		
Short-term borrowings	$ 2,334	$ 2,570
Long-term borrowings	112,368	124,833
Other liabilities	2,711	2,710
Total liabilities	117,413	130,113
Commitments and contingencies		
Equity		
Common stock, par value $0.01 per share; 1.125 billion shares authorized: 436 million and 431 million shares issued, respectively	4	4
Additional paid-in capital	3,022	2,967
Accumulated other comprehensive (loss) income (net of tax (expense) benefit of $(3) and $30, respectively)	6	(51)
Retained earnings	2,890	2,414
Total Navient Corporation stockholders' equity before treasury stock	5,922	5,334
Less: Common stock held in treasury at cost: 145 million and 82 million shares, respectively	(2,223)	(1,425)
Total Navient Corporation stockholders' equity	3,699	3,909
Noncontrolling interest	24	24
Total equity	3,723	3,933
Total liabilities and equity	$121,136	$134,046

Supplemental information — assets and liabilities of consolidated variable interest entities:

	December 31, 2016	December 31, 2015
FFELP Loans	$83,429	$ 91,516
Private Education Loans	20,500	23,124
Other loans	79	—
Restricted cash	3,434	3,553
Other assets, net	(11)	293
Short-term borrowings	1,078	710
Long-term borrowings	95,492	106,510
Net assets of consolidated variable interest entities	$10,861	$ 11,266

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Years Ended December 31,		
	2016	**2015**	**2014**
Interest income:			
FFELP Loans	$2,528	$2,524	$2,556
Private Education Loans	1,587	1,756	2,156
Other loans	9	7	9
Cash and investments	22	8	9
Total interest income	4,146	4,295	4,730
Total interest expense	2,441	2,074	2,063
Net interest income	1,705	2,221	2,667
Less: provisions for loan losses	429	581	647
Net interest income after provisions for loan losses	1,276	1,640	2,020
Other income (loss):			
Servicing revenue	304	340	298
Asset recovery and business processing revenue	390	367	388
Other income	7	17	82
Losses on sales of loans and investments	—	(9)	—
Gains on debt repurchases	1	21	—
Gains (losses) on derivative and hedging activities, net	117	166	139
Total other income	819	902	907
Expenses:			
Salaries and benefits	500	467	479
Other operating expenses	451	451	508
Total operating expenses	951	918	987
Goodwill and acquired intangible asset impairment and amortization expense	36	12	9
Restructuring and other reorganization expenses	—	32	113
Total expenses	987	962	1,109
Income from continuing operations, before income tax expense	1,108	1,580	1,818
Income tax expense	427	597	681
Net income from continuing operations	681	983	1,137
Income from discontinued operations, net of tax expense	—	1	—
Net income	681	984	1,137
Less: net income (loss) attributable to noncontrolling interest	—	—	—
Net income attributable to Navient Corporation	681	984	1,137
Preferred stock dividends	—	—	6
Net income attributable to Navient Corporation common stock	$ 681	$ 984	$1,131
Basic earnings per common share attributable to Navient Corporation	$ 2.15	$ 2.62	$ 2.71
Average common shares outstanding	316	376	417
Diluted earnings per common share attributable to Navient Corporation	$ 2.12	$ 2.58	$ 2.66
Average common and common equivalent shares outstanding	322	382	425
Dividends per common share attributable to Navient Corporation	$ .64	$ .64	$ .60

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years Ended December 31,		
	2016	**2015**	**2014**
Net income	$681	$984	$1,137
Other comprehensive income (loss):			
Unrealized gains (losses) on derivatives:			
Unrealized hedging gains (losses) on derivatives	91	(93)	(11)
Reclassification adjustments for derivative (gains) losses included in net income (interest expense)	(1)	(1)	3
Total unrealized gains (losses) on derivatives	90	(94)	(8)
Unrealized gains (losses) on investments	—	—	2
Income tax (expense) benefit	(33)	34	2
Other comprehensive income (loss), net of tax expense (benefit)	57	(60)	(4)
Total comprehensive income attributable to Navient Corporation	$738	$924	$1,133

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Preferred Stock Shares	Common Stock Shares Issued	Common Stock Shares Treasury	Common Stock Shares Outstanding	Preferred Stock	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2013	7,300,000	545,210,941	(116,262,066)	428,948,875	$ 565	$109	$ 4,399	$13	$ 2,542	$(2,033)	$ 5,595	$ 5	$ 5,600
Comprehensive income:													
Net income	—	—	—	—	—	—	—	—	1,137	—	1,137	—	1,137
Other comprehensive loss, net of tax	—	—	—	—	—	—	—	(4)	—	—	(4)	—	(4)
Total comprehensive income	—	—	—	—	—	—	—	—	—	—	1,133	—	1,133
Cash dividends:													
Common stock ($.60 per share)	—	—	—	—	—	—	—	—	(249)	—	(249)	—	(249)
Preferred stock, series A ($1.74 per share)	—	—	—	—	—	—	—	—	(4)	—	(4)	—	(4)
Preferred stock, series B ($.98 per share)	—	—	—	—	—	—	—	—	(2)	—	(2)	—	(2)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	—	—	(3)	—	(3)	—	(3)
Issuance of common shares	—	7,389,962	—	7,389,962	—	(80)	138	—	—	—	58	—	58
Retirement of common stock in treasury	—	(126,963,268)	126,963,268	—	—	(25)	(2,263)	—	—	2,288	—	—	—
Tax impact of employee stock-based compensation plans	—	—	—	—	—	—	15	—	—	—	15	—	15
Stock-based compensation expense	—	—	—	—	—	—	39	—	—	—	39	—	39
Common stock repurchased	—	—	(30,432,689)	(30,432,689)	—	—	—	—	—	(600)	(600)	—	(600)
Shares repurchased related to employee stock-based compensation plans	—	—	(4,171,342)	(4,171,342)	—	—	—	—	—	(87)	(87)	—	(87)
Deconsolidation of subsidiary	—	—	—	—	—	—	—	—	—	—	—	(5)	(5)
Distribution of consumer banking business	(7,300,000)	—	—	—	(565)	—	565	—	(1,751)	—	(1,751)	—	(1,751)
Balance at December 31, 2014	—	425,637,635	(23,902,829)	401,734,806	$ —	$ 4	$ 2,893	$ 9	$ 1,670	$ (432)	$ 4,144	$—	$ 4,144

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares			Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Issued	Treasury	Outstanding								
Balance at December 31, 2014	425,637,635	(23,902,829)	401,734,806	$ 4	$2,893	$ 9	$1,670	$ (432)	$4,144	$—	$4,144
Comprehensive income:											
Net income	—	—	—	—	—	—	984	—	984	—	984
Other comprehensive loss, net of tax	—	—	—	—	—	(60)	—	—	(60)	—	(60)
Total comprehensive income	—	—	—	—	—	—	—	—	924	—	924
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(240)	—	(240)	—	(240)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	—	—	—	—	—
Issuance of common shares	4,924,021	—	4,924,021	—	34	—	—	—	34	—	34
Tax impact of employee stock-based compensation plans	—	—	—	—	11	—	—	—	11	—	11
Stock-based compensation expense	—	—	—	—	29	—	—	—	29	—	29
Common stock repurchased	—	(56,043,711)	(56,043,711)	—	—	—	—	(945)	(945)	—	(945)
Shares repurchased related to employee stock-based compensation plans	—	(2,404,328)	(2,404,328)	—	—	—	—	(48)	(48)	—	(48)
Noncontrolling interests in businesses	—	—	—	—	—	—	—	—	—	24	24
Balance at December 31, 2015	430,561,656	(82,350,868)	348,210,788	$ 4	$2,967	$(51)	$2,414	$(1,425)	$3,909	$24	$3,933

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares			Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Issued	Treasury	Outstanding								
Balance at December 31, 2015	430,561,656	(82,350,868)	348,210,788	$ 4	$2,967	$(51)	$2,414	$(1,425)	$3,909	$24	$3,933
Comprehensive income:											
Net income	—	—	—	—	—	—	681	—	681	—	681
Other comprehensive income, net of tax	—	—	—	—	—	57	—	—	57	—	57
Total comprehensive income	—	—	—	—	—	—	—	—	738	—	738
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(201)	—	(201)	—	(201)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	(4)	—	(4)	—	(4)
Issuance of common shares	5,476,010	—	5,476,010	—	35	—	—	—	35	—	35
Tax impact of employee stock-based compensation plans	—	—	—	—	(6)	—	—	—	(6)	—	(6)
Stock-based compensation expense	—	—	—	—	26	—	—	—	26	—	26
Common stock repurchased	—	(59,625,325)	(59,625,325)	—	—	—	—	(755)	(755)	—	(755)
Shares repurchased related to employee stock-based compensation plans	—	(3,197,355)	(3,197,355)	—	—	—	—	(43)	(43)	—	(43)
Balance at December 31, 2016	436,037,666	(145,173,548)	290,864,118	$ 4	$3,022	$ 6	$2,890	$(2,223)	$3,699	$24	$3,723

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years Ended December 31,		
	2016	2015	2014
Operating activities			
Net income	$ 681	$ 984	$ 1,137
Adjustments to reconcile net income to net cash provided by operating activities:			
Income from discontinued operations, net of tax	—	(1)	—
Losses on sales of loans and investments	—	9	—
Gains on debt repurchases, net	(1)	(21)	—
Goodwill and acquired intangible asset impairment and amortization expense	36	12	9
Stock-based compensation expense	26	29	39
Unrealized gains on derivative and hedging activities	(328)	(781)	(797)
Provisions for loan losses	429	581	647
Decrease (increase) in restricted cash — other	10	66	(64)
(Increase) decrease in accrued interest receivable	(26)	175	(75)
Decrease in accrued interest payable	(92)	(42)	(27)
Decrease in other assets	628	1,038	846
Decrease in other liabilities	(6)	(139)	(51)
Total net cash provided by operating activities	1,357	1,910	1,664
Investing activities			
Education loans acquired	(3,683)	(3,736)	(13,803)
Reduction of education loans:			
Installment payments, claims and other	14,923	13,933	12,321
Proceeds from sales of education loans	—	569	—
Other investing activities, net	35	131	123
Purchases of available-for-sale securities	—	—	(28)
Proceeds from maturities of available-for-sale securities	2	1	4
Purchases of other securities	(44)	(187)	(785)
Proceeds from sales and maturities of other securities	49	97	800
Decrease (increase) in restricted cash — variable interest entities	129	220	(285)
Purchase of subsidiaries, net of cash acquired	—	(342)	—
Total net cash provided by (used in) investing activities	11,411	10,686	(1,653)
Financing activities			
Distribution of consumer banking business	—	—	(2,217)
Borrowings collateralized by loans in trust — issued	6,691	5,011	6,776
Borrowings collateralized by loans in trust — repaid	(13,226)	(14,706)	(12,534)
Asset-backed commercial paper conduits, net	(4,002)	974	5,440
Other long-term borrowings issued	1,231	493	1,817
Other long-term borrowings repaid	(2,603)	(2,787)	(3,162)
Other financing activities, net	(244)	(245)	251
Retail and other deposits, net	—	—	726
Common stock repurchased	(755)	(945)	(600)
Common stock dividends paid	(201)	(240)	(249)
Preferred stock dividends paid	—	—	(6)
Net cash used in financing activities	(13,109)	(12,445)	(3,758)
Net (decrease) increase in cash and cash equivalents	(341)	151	(3,747)
Cash and cash equivalents at beginning of year	1,594	1,443	5,190
Cash and cash equivalents at end of year	$ 1,253	$ 1,594	$ 1,443
Cash disbursements made (refunds received) for:			
Interest	$ 2,301	$ 1,981	$ 1,983
Income taxes paid	$ 249	$ 88	$ 484
Income taxes received	$ (4)	$ (14)	$ (108)

See accompanying notes to consolidated financial statements.

1. Organization and Business

Navient's Business

Navient is a Fortune 500 company that provides asset management and business processing services to education, health care and government clients at the federal, state and local levels. We help our clients and millions of Americans achieve financial success through our services and support. Headquartered in Wilmington, Delaware, Navient employs team members in Western New York, Northeastern Pennsylvania, Indiana, Tennessee, Texas, Virginia and other locations.

Navient holds the largest portfolio of education loans insured or federally guaranteed under the Federal Family Education Loan Program ("FFELP"). We also hold the largest portfolio of Private Education Loans. Navient services its own portfolio of education loans, as well as education loans owned by the United States Department of Education ("ED"), financial institutions and nonprofit education lenders. Navient is one of the largest servicers to ED under its Direct Student Loan Program ("DSLP"). Our data-driven insight, service and innovation support customers on the path to successful education loan repayment.

Navient also provides business processing services to education-related clients, such as guaranty agencies and colleges and universities.

Finally, the company leverages its scale and expertise to provide additional business processing services to a variety of other clients, including federal agencies, state and local governments, regional authorities, courts, hospitals, health care systems and other health care providers, financial service providers, and municipalities.

For all our clients, we aim to improve their financial performance, optimize their operations, and maintain compassionate, compliant service for their customers and constituents.

Spin-Off of Navient

On April 30, 2014, the spin-off of Navient from SLM Corporation (the "Spin-Off") was completed and Navient became an independent, publicly traded company focused on asset management and business processing services. The separation was completed through the distribution of 100 percent of the outstanding shares of Navient common stock, on the basis of one share of Navient common stock for each share of SLM Corporation common stock. SLM Corporation continues operation as a separate publicly traded company and includes Sallie Mae Bank.

Due to the relative significance of Navient to SLM Corporation prior to the Spin-Off, for financial reporting purposes, Navient is treated as the "accounting spinnor" and therefore is the "accounting successor" to SLM Corporation as constituted prior to the Spin-Off, notwithstanding the legal form of the Spin-Off. Since Navient is the accounting successor, the historical financial statements of SLM Corporation prior to the Spin-Off are the historical financial statements of Navient. As a result, the GAAP financial results reported in this Annual Report on Form 10-K include the historical financial results of SLM Corporation prior to the Spin-Off on April 30, 2014 (i.e., such consolidated results include our asset management and business processing services business and the consumer banking business associated with Sallie Mae Bank ("SLM BankCo")) and reflect the deemed distribution of SLM BankCo to SLM Corporation's stockholders on April 30, 2014.

1. Organization and Business (Continued)

The following table shows the condensed balance sheet of SLM BankCo that the financial statements of Navient reflect as a shareholder distribution on April 30, 2014:

(Dollars in millions)	April 30, 2014
Assets	
FFELP Loans, net	$ 1,380
Private Education Loans, net	7,204
Investments	139
Cash and cash equivalents	2,170
Other assets	883
Total assets	$11,776
Liabilities	
Short-term borrowings	$ 6,491
Long-term borrowings	2,750
Other liabilities[1]	825
Total liabilities	10,066
Equity	
Preferred stock	
Series A	165
Series B	400
Common equity	1,145
Total equity[2]	1,710
Total liabilities and equity	$11,776

(1) "Other liabilities" include net income tax liabilities of $383 million, which were presented as net income tax assets within "Other assets" on the consolidated financial statements of Navient.

(2) In addition to the $1,710 million of consumer banking business net assets distributed, we also removed $41 million of goodwill from our balance sheet as required under Accounting Standards Codification ("ASC") 350, "Intangibles — Goodwill and Other," in connection with the distribution. This goodwill was allocated to the consumer banking business based on relative fair value. This total of $1,751 million is the amount that appears on our consolidated statement of changes in stockholders' equity in connection with the deemed distribution of the consumer banking business.

2. Significant Accounting Policies

Use of Estimates

Our financial reporting and accounting policies conform to generally accepted accounting principles in the United States of America ("GAAP"). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Current market conditions increase the risk and complexity of the judgments in these estimates and actual results could differ from estimates. Key accounting policies that include the most significant judgments, estimates and assumptions include the allowance for loan losses, the effective interest rate method (amortization of education loan and debt premiums and discounts), fair value measurement, the consolidation of variable interest entities, and derivative accounting.

2. Significant Accounting Policies (Continued)

Consolidation

The consolidated financial statements include the accounts of Navient Corporation and its majority-owned and controlled subsidiaries and those Variable Interest Entities ("VIEs") for which we are the primary beneficiary, after eliminating the effects of intercompany accounts and transactions.

We consolidate any VIEs where we have determined we are the primary beneficiary. The primary beneficiary is the entity which has both: (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (2) the obligation to absorb losses or receive benefits of the entity that could potentially be significant to the VIE. As it relates to our securitizations and other secured borrowing facilities that are VIEs as of December 31, 2016, we are the servicer of the related education loan assets and own the Residual Interest of the securitization trusts and secured borrowing facilities. As a result, we are the primary beneficiary and consolidate those VIEs.

Fair Value Measurement

We use estimates of fair value in applying various accounting standards for our financial statements. Fair value measurements are used in one of four ways:

- In the consolidated balance sheet with changes in fair value recorded in the consolidated statement of income;
- In the consolidated balance sheet with changes in fair value recorded in the accumulated other comprehensive income section of the consolidated statement of changes in stockholders' equity;
- In the consolidated balance sheet for instruments carried at lower of cost or fair value with impairment charges recorded in the consolidated statement of income; and
- In the notes to the financial statements.

Fair value is defined as the price to sell an asset or transfer a liability in an orderly transaction between willing and able market participants. In general, our policy in estimating fair value is to first look at observable market prices for identical assets and liabilities in active markets, where available. When these are not available, other inputs are used to model fair value such as prices of similar instruments, yield curves, volatilities, prepayment speeds, default rates and credit spreads, relying first on observable data from active markets. Depending on current market conditions, additional adjustments to fair value may be based on factors such as liquidity, credit, and bid/offer spreads. Transaction costs are not included in the determination of fair value. When possible, we seek to validate the model's output to market transactions. Depending on the availability of observable inputs and prices, different valuation models could produce materially different fair value estimates. The values presented may not represent future fair values and may not be realizable.

We categorize our fair value estimates based on a hierarchical framework associated with three levels of price transparency utilized in measuring financial instruments at fair value. Classification is based on the lowest level of input that is significant to the fair value of the instrument. The three levels are as follows:

- Level 1 — Quoted prices (unadjusted) in active markets for identical assets or liabilities that we have the ability to access at the measurement date. The types of financial instruments included in level 1 are highly liquid instruments with quoted prices.
- Level 2 — Inputs from active markets, other than quoted prices for identical instruments, are used to determine fair value. Significant inputs are directly observable from active markets for substantially the full term of the asset or liability being valued.

2. Significant Accounting Policies (Continued)

- Level 3 — Pricing inputs significant to the valuation are unobservable. Inputs are developed based on the best information available. However, significant judgment is required by us in developing the inputs.

Loans

Loans, consisting primarily of federally insured education loans and Private Education Loans, that we have the ability and intent to hold for the foreseeable future are classified as held-for-investment and are carried at amortized cost. Amortized cost includes the unamortized premiums, discounts, and capitalized origination costs and fees, all of which are amortized to interest income as further discussed below. Loans which are held-for-investment also have an allowance for loan loss as needed. Any loans we have not classified as held-for-investment are classified as held-for-sale, and carried at the lower of cost or fair value. Loans are classified as held-for-sale when we have the intent and ability to sell such loans. Loans which are held-for-sale do not have the associated premium, discount, and capitalized origination costs and fees amortized into interest income. In addition, once a loan is classified as held-for-sale, there is no further adjustment to the loan's allowance for loan losses that existed immediately prior to the reclassification to held-for-sale.

Allowance for Loan Losses

We consider a loan to be impaired when, based on current information, a loss has been incurred and it is probable that we will not receive all contractual amounts due. When making our assessment as to whether a loan is impaired, we also take into account more than insignificant delays in payment. We generally evaluate impaired loans on an aggregate basis by grouping similar loans. Impaired loans also include those loans which are individually assessed for impairment at a loan level, such as in a troubled debt restructuring ("TDR"). We maintain an allowance for loan losses at an amount sufficient to absorb losses incurred in our portfolios at the reporting date based on a projection of estimated probable credit losses incurred in the portfolio.

Our Private Education Loan portfolio contains TDR and non-TDR loans. For customers experiencing financial difficulty, certain Private Education Loans for which we have granted either a forbearance of greater than three months, an interest rate reduction or an extended repayment plan are classified as TDRs. The allowance requirements are different based on these designations. In determining the allowance for loan losses on our non-TDR portfolio, we estimate the principal amount of loans that will default over the next two years (two years being the expected period between a loss event and default) and how much we expect to recover over time related to the defaulted amount. Expected defaults less our expected recoveries equal the allowance related to this portfolio. Our historical experience indicates that, on average, the time between the date that a customer experiences a default causing event (i.e., the loss trigger event) and the date that we charge off the unrecoverable portion of that loan is two years. Separately, for our TDR portfolio, we estimate an allowance amount sufficient to cover life-of-loan expected losses through an impairment calculation based on the difference between the loan's basis and the present value of expected future cash flows (which would include life-of-loan default and recovery assumptions) discounted at the loan's original effective interest rate. The separate allowance estimates for our TDR and non-TDR portfolios are combined into our total Allowance for Private Education Loan losses.

In estimating both the non-TDR and TDR allowance amounts, we start with historical experience of customer default behavior. We make judgments about which historical period to start with and then make further judgments about whether that historical experience is representative of future expectations and whether additional adjustments may be needed to those historical default rates. We also take the economic environment into consideration when calculating the allowance for loan losses. We analyze key economic statistics and the effect we expect it to have on future defaults. Key economic statistics analyzed as part of the allowance for loan

2. Significant Accounting Policies (Continued)

losses are primarily unemployment rates. Our allowance for loan losses is estimated using an analysis of delinquent and current accounts. Our model is used to estimate the likelihood that a loan may progress through the various delinquency stages and ultimately charge off. The evaluation of the allowance for loan losses is inherently subjective, as it requires material estimates that may be susceptible to significant changes. The estimate for the allowance for loan losses is subject to a number of assumptions. If actual future performance in delinquency, charge-offs and recoveries are significantly different than estimated, this could materially affect our estimate of the allowance for loan losses and the related provision for loan losses on our income statement.

Below we describe in further detail our policies and procedures for the allowance for loan losses as they relate to our Private Education Loan and FFELP Loan portfolios.

Allowance for Private Education Loan Losses

We determine the collectability of our Private Education Loan portfolio by evaluating certain risk characteristics. We consider school type, credit score (FICO), existence of a cosigner, loan status and loan seasoning as the key credit quality indicators because they have the most significant effect on our determination of the adequacy of our allowance for loan losses. The type of school customers attend can have an impact on their graduation rate and job prospects after graduation and therefore affects their ability to make payments. Credit scores are an indicator of the creditworthiness of a customer and generally the higher the credit score the more likely it is the customer will be able to make all of their contractual payments. Loan status affects the credit risk because generally a past due loan is more likely to result in a credit loss than an up-to-date loan. Additionally, loans in a deferred payment status have different credit risk profiles compared with those in current payment status. Loan seasoning affects credit risk because a loan with a history of making payments generally has a lower incidence of default than a loan with a history of making infrequent or no payments. The existence of a cosigner lowers the likelihood of default. We monitor and update these credit quality indicators in the analysis of the adequacy of our allowance for loan losses on a quarterly basis.

To estimate the probable credit losses incurred in the loan portfolio at the reporting date, we use historical experience of customer payment behavior in connection with the key credit quality indicators and incorporate management expectations regarding macroeconomic and collection performance factors. Our model is based upon the most recent twelve months of actual collection experience as the starting point for the non-TDR portfolio and the most recent approximate 10 years for the TDR portfolio and applies expected macroeconomic changes and collection procedure changes to estimate expected losses caused by loss events incurred as of the balance sheet date. Our model for the non-TDR portfolio places a greater emphasis on the more recent default experience rather than the default experience for older historical periods, as we believe the recent default experience is more indicative of the probable losses incurred in the loan portfolio today that will default over the next two years. The TDR portfolio uses a longer historical default experience since we are projecting life of loan remaining losses. Similar to estimating defaults, we use historical customer payment behavior to estimate the timing and amount of future recoveries on charged-off loans. We use judgment in determining whether historical performance is representative of what we expect to collect in the future. We then apply the default and collection rate projections to each category of loans. Once the quantitative calculation is performed, we review the adequacy of the allowance for loan losses and determine if qualitative adjustments need to be considered. Additionally, we consider changes in laws and regulations that could potentially impact the allowance for loan losses. More judgment has been required over the last several years, compared with years prior, in light of the U.S. economy and its effect on our customers' ability to pay their obligations. We believe that our model reflects recent customer behavior, loan performance and collection performance, as well as expectations about economic factors.

Our collection policies allow for periods of nonpayment for customers requesting additional payment grace periods upon leaving school or experiencing temporary difficulty meeting payment obligations. This is referred

2. Significant Accounting Policies (Continued)

to as forbearance status and is considered in our allowance for loan losses. The loss confirmation period is in alignment with our typical collection cycle and takes into account these periods of nonpayment.

Certain Private Education Loans do not require customers to begin repayment until six months after they have graduated or otherwise left school. Consequently, our loss estimates for these programs are generally low while the customer is in school. At December 31, 2016, 6 percent of the principal balance in the higher education Private Education Loan portfolio was related to customers who are in an in-school/grace/deferment status and not required to make payments. As this population of customers leaves school, they will be required to begin payments on their loans, and the allowance for loan losses may change accordingly.

As part of determining the adequacy of the allowance for loan losses, we review key allowance and loan metrics. The most significant of these metrics considered are the charge-off rate and delinquency and forbearance percentages and the resulting allowance coverage of charge-offs ratio, and the allowance as a percentage of total loans and of loans in repayment.

Our allowance for Private Education Loan losses also provides for possible additional future charge-offs related to the receivable for partially charged-off Private Education Loans. At the end of each month, for loans that are 212 or more days past due, we charge off the estimated loss of a defaulted loan balance. Actual recoveries are applied against the remaining loan balance that was not charged off. We refer to this remaining loan balance as the “receivable for partially charged-off loans.” If actual periodic recoveries are less than expected, the difference is immediately charged off through the allowance for Private Education Loan losses with an offsetting reduction in the receivable for partially charged-off Private Education Loans. If actual periodic recoveries are greater than expected, they will be reflected as a recovery through the allowance for Private Education Loan losses once the cumulative recovery amount exceeds the cumulative amount originally expected to be recovered. The financial crisis, which began in 2007, impacted our collections on defaulted loans and as a result, Private Education Loans which defaulted from 2007 through March 31, 2015, experienced collection performance below our pre-financial crisis experience. For that reason, until we gained enough data and experience to determine the long-term, post-default recovery rate of 21 percent in second-quarter 2015, we established a reserve for potential shortfalls in recoveries. In the second quarter of 2015, the portion of the loan amount charged off at default increased from 73 percent to 79 percent. This did not impact the provision for loan losses as previously this had been reserved through the allowance for loan losses. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

Allowance for FFELP Loan Losses

FFELP Loans are insured as to their principal and accrued interest in the event of default subject to a Risk Sharing level based on the date of loan disbursement. These insurance obligations are supported by contractual rights against the United States. For loans disbursed after October 1, 1993, and before July 1, 2006, we receive 98 percent reimbursement on all qualifying default claims. For loans disbursed on or after July 1, 2006, we receive 97 percent reimbursement. For loans disbursed prior to October 1, 1993, we receive 100 percent reimbursement.

Similar to the allowance for Private Education Loan losses, the allowance for FFELP Loan losses uses historical experience of customer default behavior and a two-year loss confirmation period to estimate the credit losses incurred in the loan portfolio at the reporting date. We apply the default rate projections, net of applicable Risk Sharing, to each category for the current period to perform our quantitative calculation. Once the quantitative calculation is performed, we review the adequacy of the allowance for loan losses and determine if qualitative adjustments need to be considered. For FFELP Loans that have lost their government insurance and have been charged off, any subsequent cash recoveries benefit the allowance for loan losses when received.

2. Significant Accounting Policies (Continued)

Correction of an Immaterial Error in Prior Periods Related to FFELP Provision for Loan Losses

Under the FFELP, in the event of a borrower default, the principal balance and all unpaid accrued interest on FFELP Loans is insured for 97 percent to 100 percent of the defaulted amount. Under certain circumstances, FFELP Loans can lose their government insurance. In these cases, within our servicing systems these loans are assigned a "Permanently Uninsured" status code. When FFELP Loans become permanently uninsured, they no longer have the protection of government insurance and the owner of such loans is exposed to 100 percent of losses upon default. In the fourth quarter of 2016, the Company identified a portfolio of Permanently Uninsured FFELP Loans ($105 million as of December 31, 2015) that were correctly charged off in prior periods. Subsequent to the charge off, these loans were incorrectly accounted for as a recovery of previously defaulted loans as a result of the incorrect application of a system data field. This error understated the previously reported net charge-offs and provision for loan losses in 2015 and earlier years. The impact of this error to all prior periods was not material. The Company has revised the prior periods contained in this Form 10-K to correct this error. The table below shows the impact of this error to the years ended December 31, 2015 and 2014.

	Year Ended December 31,	
(Dollars in millions)	**2015**	**2014**
Increase to FFELP Loan charge-offs and provision for loan losses[1]	$ 20	$ 19
After-tax reduction to net income from increase in FFELP Loan provision for loan losses	$ (13)	$ (12)
Reduction to diluted earnings per share from increase in FFELP Loan provision for loan losses	$(.03)	$ (.03)
GAAP net income — previously reported	$997	$1,149
GAAP net income — revised	$984	$1,137

(1) In 2015 and 2014, $20 million and $19 million of FFELP Permanently Uninsured Loans, respectively, were incorrectly classified as a recovery of previously defaulted loans, which understated the net charge-offs and provision for loan losses reported for FFELP Loans. The revised results correct for this error and result in $20 million and $19 million of additional FFELP Loan charge-offs and provision for loan losses being recorded in 2015 and 2014, respectively. There were $66 million of FFELP Permanently Uninsured Loans in years prior to 2014 that were incorrectly classified as a recovery of previously defaulted loans. The impact to each of the periods prior to 2014 was not material. Retained earnings were reduced by $42 million (after tax) as of December 31, 2013, to correct for this error.

Investments

Our available-for-sale investment portfolio consists of investments that are carried at fair value, with the temporary changes in fair value carried as a separate component of stockholders' equity, net of taxes. The amortized cost of debt securities in this category is adjusted for premiums and accretion of discounts, which are amortized using the effective interest rate method. Other-than-temporary impairment is evaluated by considering several factors, including the length of time and extent to which the fair value has been less than the amortized cost basis, the financial condition and near-term prospects of the security (considering factors such as adverse conditions specific to the security and ratings agency actions), and the intent and ability to retain the investment to allow for an anticipated recovery in fair value. The entire fair value loss on a security that is other-than-temporary impairment is recorded in earnings if we intend to sell the security or if it is more likely than not that we will be required to sell the security before the expected recovery of the loss. However, if the impairment is other-than-temporary, and those two conditions do not exist, the portion of the impairment related to credit losses is recorded in earnings and the impairment related to other factors is recorded in other comprehensive income. Securities classified as trading are accounted for at fair value with unrealized gains and losses included in investment income. Securities that we have the intent and ability to hold to maturity are classified as held-to-maturity and are accounted for at amortized cost unless the security is determined to have an other-than-temporary impairment. In this case it is accounted for in the same manner described above.

2. Significant Accounting Policies (Continued)

We also have other investments, including a receivable for cash collateral posted to derivative counterparties. These investments are accounted for at amortized cost in other investments.

Cash and Cash Equivalents

Cash and cash equivalents can include term federal funds, Eurodollar deposits, commercial paper, asset-backed commercial paper, treasuries and money market funds with original terms to maturity of less than three months.

Restricted Cash and Investments

Restricted cash primarily includes amounts held in education loan securitization trusts and other secured borrowings. This cash must be used to make payments related to trust obligations. Amounts on deposit in these accounts are primarily the result of timing differences between when principal and interest is collected on the trust assets and when principal and interest is paid on trust liabilities. As such, changes in this balance are reflected in investing activities in the statement of cash flows.

Securities pledged as collateral related to our derivative portfolio, where the counterparty has rights to replace the securities, are classified as restricted. When the counterparty does not have these rights, the security is recorded in investments and disclosed as pledged collateral in the notes. Additionally, certain counterparties require cash collateral pledged to us to be segregated and held in restricted cash accounts.

Goodwill and Acquired Intangible Assets

Goodwill is not amortized but is tested periodically for impairment. We test goodwill for impairment annually as of October 1 at the reporting unit level, which is the same as or one level below a business segment. Goodwill is also tested at interim periods if an event occurs or circumstances change that would indicate the carrying amount may be impaired.

We assess qualitative factors to determine whether it is "more-likely-than-not" that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test. The "more-likely-than-not" threshold is defined as having a likelihood of more than 50 percent. If, after assessing relevant qualitative factors, we conclude that it is "more-likely-than-not" that the fair value of a reporting unit as of October 1 is less than its carrying amount, we will complete Step 1 of the goodwill impairment analysis. Step 1 consists of a comparison of the fair value of the reporting unit to the reporting unit's carrying value, including goodwill. If the carrying value of the reporting unit exceeds the fair value, Step 2 in the goodwill impairment analysis is performed to measure the amount of impairment loss, if any. Step 2 of the goodwill impairment analysis compares the implied fair value of the reporting unit's goodwill to the carrying value of the reporting unit's goodwill. The implied fair value of goodwill is determined in a manner consistent with determining goodwill in a business combination. If the carrying amount of the reporting unit's goodwill exceeds the implied fair value of the goodwill, an impairment loss is recognized in an amount equal to that excess.

Acquired intangible assets include, but are not limited to, trade names, customer and other relationships, and non-compete agreements. Acquired intangible assets with finite lives are amortized over their estimated useful lives in proportion to their estimated economic benefit. Finite-lived acquired intangible assets are reviewed for impairment using an undiscounted cash flow analysis when an event occurs or circumstances change indicating the carrying amount of a finite-lived asset or asset group may not be recoverable. If the carrying amount of the

2. Significant Accounting Policies (Continued)

asset or asset groups exceeds the undiscounted cash flows, the fair value of the asset or asset group is determined using an acceptable valuation technique. An impairment loss would be recognized if the carrying amount of the asset (or asset group) exceeds the fair value of the asset or asset group. The impairment loss recognized would be the difference between the carrying amount and fair value. Indefinite-life acquired intangible assets are not amortized. We test these indefinite-life acquired intangible assets for impairment annually as of October 1 or at interim periods if an event occurs or circumstances change that would indicate the carrying value of these assets may be impaired. The annual or interim impairment test of indefinite-life acquired intangible assets is based primarily on a discounted cash flow analysis.

Securitization Accounting

Our securitizations use a two-step structure with a special purpose entity that legally isolates the transferred assets from us, even in the event of bankruptcy. Transactions receiving sale treatment are also structured to ensure that the holders of the beneficial interests issued are not constrained from pledging or exchanging their interests, and that we do not maintain effective control over the transferred assets. If these criteria are not met, then the transaction is accounted for as an on-balance sheet secured borrowing. In all cases, irrespective of whether they qualify as accounting sales our securitizations are legally structured to be sales of assets that isolate the transferred assets from us. If a securitization qualifies as a sale, we then assess whether we are the primary beneficiary of the securitization trust and are required to consolidate such trust. If we are the primary beneficiary, then no gain or loss is recognized. See "Consolidation" of this Note 2 for additional information regarding the accounting rules for consolidation when we are the primary beneficiary of these trusts.

Irrespective of whether a securitization receives sale or on-balance sheet treatment, our continuing involvement with our securitization trusts is generally limited to:

- Owning the equity certificates of certain trusts.
- The servicing of the education loan assets within the securitization trusts, on both a pre- and post-default basis.
- Our acting as administrator for the securitization transactions we sponsored, which includes remarketing certain bonds at future dates.
- Our responsibilities relative to representation and warranty violations.
- Temporarily advancing to the trust certain borrower benefits afforded the borrowers of education loans that have been securitized. These advances subsequently are returned to us in the next quarter.
- Certain back-to-back derivatives entered into by us contemporaneously with the execution of derivatives by certain Private Education Loan securitization trusts.
- The option held by us to buy certain delinquent loans from certain Private Education Loan securitization trusts.
- The option to exercise the clean-up call and purchase the education loans from the trust when the asset balance is 10 percent or less of the original loan balance.
- The option, on some trusts, to purchase education loans aggregating up to 10 percent of the trust's initial pool balance.
- The option (in certain trusts) to call rate reset notes in instances where the remarketing process has failed.

2. Significant Accounting Policies (Continued)

The investors of the securitization trusts have no recourse to our other assets should there be a failure of the trusts to pay when due. Generally, the only arrangements under which we have to provide financial support to the trusts are representation and warranty violations requiring the buyback of loans.

Under the terms of the transaction documents of certain trusts, we have, from time to time, exercised our options to purchase delinquent loans from Private Education Loan trusts, to purchase the remaining loans from trusts once the loan balance falls below 10 percent of the original amount, to purchase education loans up to 10 percent of the trust's initial balance, or to call rate reset notes. Certain trusts maintain financial arrangements with third parties also typical of securitization transactions, such as derivative contracts (swaps) and bond insurance policies that, in the case of a counterparty failure, could adversely impact the value of any Residual Interest.

We do not record servicing assets or servicing liabilities when our securitization trusts are accounted for as on-balance sheet secured financings. As of December 31, 2016 and 2015, all of our securitization trusts are on-balance sheet, except as discussed in the next paragraph, and as a result we do not have servicing assets or liabilities recorded on the consolidated balance sheet related to these securitization trusts.

As of December 31, 2016, we have $11 million of servicing assets on our balance sheet related to Residual Interests in FFELP Loan securitization trusts we sold in 2013. See "Note 3 — Education Loans" for further details.

Education Loan Interest Income

The Company has a net unamortized premium balance of $422 million in connection with its $112 billion education loan portfolio as of December 31, 2016. In 2016, the Company corrected its policy for applying the interest method used to amortize premium and discounts on the education loan portfolio. Previously, the Company amortized premium and discounts by including in its prepayment assumption forecasted payments in excess of contractually required payments as well as forecasted defaults and term extensions (deferment and forbearance or other payment modification programs). We determined that accounting rules allow only payments in excess of contractually required payments to be included in the prepayment assumption. Including defaults in estimated future prepayments has the effect of accelerating the amortization of the net premium balance related to our education loan portfolio. Including term extensions in estimated future prepayments has the effect of slowing down the amortization of the net premium balance related to our education loan portfolio.

The net impact of this error was a $2 million reduction to pre-tax net income for the year ended December 31, 2016. The Constant Prepayment Rates ("CPR") as of December 31, 2016 under our revised policy are 5 percent, 3 percent and 5 percent for FFELP Stafford Loans, FFELP Consolidation Loans and Private Education Loans, respectively. Our prior policy's CPRs as of December 31, 2016 would have been 5 percent, 3 percent and 6 percent for FFELP Stafford Loans, FFELP Consolidation Loans and Private Education Loans, respectively. We have concluded this error had an immaterial impact to 2016 results as well as results for prior years.

For loans classified as held-for-investment, we recognize education loan interest income as earned, adjusted for the amortization of premiums (which includes capitalized direct origination costs), discounts and Repayment Borrower Benefits. These adjustments result in income being recognized based upon the expected yield of the loan over its life after giving effect to expected prepayments and to estimates related to Repayment Borrower Benefits. We amortize premium and discount on education loans using a CPR which measures the rate at which loans in the portfolio pay down principal compared to their stated terms. In determining the CPR, we only

2. Significant Accounting Policies (Continued)

consider payments made in excess of contractually required payments. This would include loan consolidation and other early payoff activity. For Repayment Borrower Benefits, the estimates of their effect on education loan yield are based on analyses of historical payment behavior of customers who are eligible for the incentives and its effect on the ultimate qualification rate for these incentives. We regularly evaluate the assumptions used to estimate the prepayment speeds and the qualification rates used for Repayment Borrower Benefits. In instances where there are changes to the assumptions, amortization is adjusted on a cumulative basis to reflect the change since the acquisition of the loan. Additionally, interest earned on education loans reflects potential non-payment adjustments in accordance with our uncollectible interest recognition policy as discussed further in “Allowance for Loan Losses” of this Note 2. We do not amortize any premiums, discounts or other adjustments to the basis of education loans when they are classified as held-for-sale.

Interest Expense

Interest expense is based upon contractual interest rates adjusted for the amortization of debt issuance costs, premiums and discounts. Our interest expense may also be adjusted for net payments/receipts related to interest rate and foreign currency swap agreements that qualify and are designated as hedges. Interest expense also includes the amortization of deferred gains and losses on closed hedge transactions that qualified as hedges. Amortization of debt issuance costs, premiums, discounts and terminated hedge-basis adjustments are recognized using the effective interest rate method.

Servicing Revenue

We perform loan servicing functions for third-parties in return for a servicing fee. Our compensation is typically based on a per-unit fee arrangement or a percentage of the loans outstanding. We recognize servicing revenues associated with these activities based upon the contractual arrangements as the services are rendered. We recognize late fees on third-party serviced loans as well as on loans in our portfolio according to the contractual provisions of the promissory notes, as well as our expectation of collectability.

Asset Recovery and Business Processing Revenue

Asset recovery fees are received for collections or rehabilitation of delinquent or defaulted debt on behalf of clients performed on a contingency basis. Revenue is earned and recognized upon the completion of rehabilitation activities or upon receipt of the delinquent customer funds.

We also receive fees from Guarantor agencies for performing default aversion services on delinquent loans prior to default. The fee is received when the loan is initially placed with us and we are obligated to provide such services for the remaining life of the loan for no additional fee. In the event that the loan defaults, in accordance with certain contracts, we are obligated to rebate a portion of the fee to the Guarantor agency in proportion to the principal and interest outstanding when the loan defaults. We recognize fees received, net of an estimate of future rebates owed due to subsequent defaults, over the service period which is estimated to be the life of the loan. As of December 31, 2016, our balance sheet includes $105 million of liabilities attributed to deferred revenue and rebate reserves related to these default aversion services.

Business processing fees are received generally based on processing transactions. Revenue is earned and recognized upon the completion of processing the transaction and in some cases also upon the processing of a payment.

2. Significant Accounting Policies (Continued)

Transfer of Financial Assets and Extinguishments of Liabilities

We account for loan sales and debt repurchases in accordance with the applicable accounting guidance. Our securitizations and other secured borrowings are accounted for as on-balance sheet secured borrowings. See "Securitization Accounting" of this Note 2 for further discussion on the criteria assessed to determine whether a transfer of financial assets is a sale or a secured borrowing. If a transfer of loans qualifies as a sale, we derecognize the loan and recognize a gain or loss as the difference between the carrying basis of the loan sold and liabilities retained and the compensation received.

We periodically repurchase our outstanding debt in the open market or through public tender offers. We record a gain or loss on the early extinguishment of debt based upon the difference between the carrying cost of the debt and the amount paid to the third party and is net of hedging gains and losses when the debt is in a qualifying hedge relationship.

We recognize the results of a transfer of loans and the extinguishment of debt based upon the settlement date of the transaction.

Derivative Accounting

The accounting guidance for our derivative instruments, which primarily includes interest rate swaps, cross-currency interest rate swaps and Floor Income Contracts, requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded at fair value on the balance sheet as either an asset or liability. Derivative positions are recorded as net positions by counterparty based on master netting arrangements exclusive of accrued interest and cash collateral held or pledged.

Many of our derivatives, mainly fixed to variable or variable to fixed interest rate swaps and cross-currency interest rate swaps, qualify as effective hedges. For these derivatives, the relationship between the hedging instrument and the hedged items (including the hedged risk and method for assessing effectiveness), as well as the risk management objective and strategy for undertaking various hedge transactions at the inception of the hedging relationship, is documented. Each derivative is designated to either a specific (or pool of) asset(s) or liability(ies) on the balance sheet or expected future cash flows, and designated as either a "fair value" or a "cash flow" hedge. Fair value hedges are designed to hedge our exposure to changes in fair value of a fixed rate or foreign denominated asset or liability, while cash flow hedges are designed to hedge our exposure to variability of either a floating rate asset's or liability's cash flows or an expected fixed rate debt issuance. For effective fair value hedges, both the derivative and the hedged item (for the risk being hedged) are marked-to-market with any difference reflecting ineffectiveness and recorded immediately in the statement of income. For effective cash flow hedges, the change in the fair value of the derivative is recorded in other comprehensive income, net of tax, and recognized in earnings in the same period as the earnings effects of the hedged item. The ineffective portion of a cash flow hedge is recorded immediately through earnings. The assessment of the hedge's effectiveness is performed at inception and on an ongoing basis, generally using regression testing. For hedges of a pool of assets or liabilities, tests are performed to demonstrate the similarity of individual instruments of the pool. When it is determined that a derivative is not currently an effective hedge, ineffectiveness is recognized for the full change in value of the derivative with no offsetting mark-to-market of the hedged item for the current period. If it is also determined the hedge will not be effective in the future, we discontinue the hedge accounting prospectively, cease recording changes in the fair value of the hedged item, and begin amortization of any basis adjustments that exist related to the hedged item.

We also have derivatives, primarily Floor Income Contracts and certain basis swaps, that we believe are effective economic hedges but do not qualify for hedge accounting treatment. These derivatives are classified as "trading" and as a result they are marked-to-market through earnings with no consideration for the fair value fluctuation of the economically hedged item.

2. Significant Accounting Policies (Continued)

The "gains (losses) on derivative and hedging activities, net" line item in the consolidated statements of income includes the unrealized changes in the fair value of our derivatives (except effective cash flow hedges which are recorded in other comprehensive income), the unrealized changes in fair value of hedged items in qualifying fair value hedges, as well as the realized changes in fair value related to derivative net settlements and dispositions that do not qualify for hedge accounting. Net settlement income/expense on derivatives that qualify as hedges are included with the income or expense of the hedged item (mainly interest expense).

Accounting for Stock-Based Compensation

We recognize stock-based compensation cost in our consolidated statements of income using the fair value based method. Under this method we determine the fair value of the stock-based compensation at the time of the grant and recognize the resulting compensation expense over the grant's vesting period. We record stock-based compensation expense net of estimated forfeitures and as such, only those stock-based awards that we expect to vest are recorded. We estimate the forfeiture rate based on historical forfeitures of equity awards and adjust the rate to reflect changes in facts and circumstances, if any. Ultimately, the total expense recognized over the vesting period will equal the fair value of awards that actually vest.

Restructuring and Other Reorganization Expenses

From time to time we implement plans to restructure our business. In conjunction with these restructuring plans, involuntary benefit arrangements, disposal costs (including contract termination costs and other exit costs), as well as certain other costs that are incremental and incurred as a direct result of our restructuring plans, are classified as restructuring expenses in the consolidated statements of income.

The Company administers the Navient Corporation Employee Severance Plan and the Navient Corporation Executive Severance Plan for Senior Officers (collectively, "the Severance Plan"). The Severance Plan provides severance benefits in the event of termination of the Company's full-time employees and part-time employees who work at least 24 hours per week. The Severance Plan establishes specified benefits based on base salary, job level immediately preceding termination and years of service upon involuntary termination of employment. The benefits payable under the Severance Plan relate to past service, and they accumulate and vest. Accordingly, we recognize severance expenses to be paid pursuant to the Severance Plan when payment of such benefits is probable and can be reasonably estimated in accordance with ASC 712, "Compensation — Nonretirement Postemployment Benefits." Such benefits, including severance pay calculated based on the Severance Plan, medical and dental benefits, and outplacement services expenses are classified as restructuring and other reorganization expenses in the consolidated statements of income.

Contract termination costs are expensed at the earlier of (1) the contract termination date or (2) the cease use date under the contract. Other exit costs are expensed as incurred and classified as restructuring expenses if (1) the cost is incremental to and incurred as a direct result of planned restructuring activities and (2) the cost is not associated with or incurred to generate revenues subsequent to our consummation of the related restructuring activities.

Other reorganization expenses include internal costs and third-party costs incurred in connection with our April 30, 2014 Spin-Off transaction.

During the second quarter of 2015, the Company launched an initiative to simplify and streamline its management structure following the Spin-Off of SLM BankCo to improve the operating efficiency and effectiveness of the organization. As part of the Company's streamlining efforts, restructuring and other reorganization expenses of $29 million were recognized in 2015, primarily related to severance and other related costs.

2. Significant Accounting Policies (Continued)

Income Taxes

We account for income taxes under the asset and liability approach which requires the recognition of deferred tax liabilities and assets for the expected future tax consequences of temporary differences between the carrying amounts and tax basis of our assets and liabilities. To the extent tax laws change, deferred tax assets and liabilities are adjusted in the period that the tax change is enacted.

"Income tax expense/(benefit)" includes (i) deferred tax expense/(benefit), which represents the net change in the deferred tax asset or liability balance during the year plus any change in a valuation allowance and (ii) current tax expense/(benefit), which represents the amount of tax currently payable to or receivable from a tax authority plus amounts accrued for unrecognized tax benefits. Income tax expense/(benefit) excludes the tax effects related to adjustments recorded in equity.

If we have an uncertain tax position, then that tax position is recognized only if it is more likely than not to be sustained upon examination based on the technical merits of the position. The amount of tax benefit recognized in the financial statements is the largest amount of benefit that is more than 50 percent likely of being sustained upon ultimate settlement of the uncertain tax position. We recognize interest related to unrecognized tax benefits in income tax expense/(benefit) and penalties, if any, in operating expenses.

Discontinued Operations

A disposal of a "Component" or group of components of a business resulting in a strategic shift that has or will have a major impact on the company's operations and financial results is presented as discontinued operations. This may include strategic shifts such as a disposal of a major geographic area, a major line of business or a major equity method investment. When we determine that a Component of our business has been disposed of or has met the criteria to be classified as held-for-sale such Component is presented separately as discontinued operations. If a Component is classified as held-for-sale, then it is carried at the lower of its cost basis or fair value.

Earnings (Loss) per Common Share

We compute earnings (loss) per common share ("EPS") by dividing net income allocated to common shareholders by the weighted average common shares outstanding. Net income allocated to common shareholders represents net income applicable to common shareholders (net income adjusted for preferred stock dividends). Diluted earnings per common share is computed by dividing income allocated to common shareholders by the weighted average common shares outstanding plus amounts representing the dilutive effect of stock options outstanding, restricted stock, restricted stock units, and the outstanding commitment to issue shares under the Employee Stock Purchase Plan. See "Note 10 — Earnings (Loss) per Common Share" for further discussion.

Reclassifications

Certain reclassifications have been made to the balances as of and for the years ended December 31, 2015 and 2014, to be consistent with classifications adopted for 2016, which had no effect on net income, total assets or total liabilities.

2. Significant Accounting Policies (Continued)

Recently Issued Accounting Pronouncements

Revenue Recognition

On May 28, 2014, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No 2014-09, "Revenue from Contracts with Customers," which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The new guidance supersedes current U.S. GAAP guidance on revenue recognition and requires the use of more estimates and judgements than the current revenue standards. The new guidance does not apply to revenue associated with financial instruments, including loans, that are accounted for under other U.S. GAAP. Accordingly, we do not expect the new revenue recognition guidance to have a material impact on our consolidated results of operations associated with our loan portfolios including net interest income.

We plan to adopt the new standard as of January 1, 2018, the effective date. The new standard permits the use of either the retrospective or cumulative effect transition method. Our implementation efforts to date include the identification of revenue and review of related contracts within the scope of the new standard. We have not yet identified nor do we anticipate material changes in the timing of revenue recognition. However, our review is ongoing as we continue to evaluate both contract revenue and certain contract costs.

Classification and Measurement

On January 5, 2016, the FASB issued ASU No. 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities," which reconsiders the classification and measurement of financial instruments. The new standard requires certain equity instruments be measured at fair value, with fair value changes recognized in earnings. In addition, the standard requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption. It will be effective for the Company as of January 1, 2018. We are currently assessing the impact that adopting this new accounting standard will have on our consolidated financial statements and footnote disclosures, but expect it to be immaterial.

Leases

On February 25, 2016, the FASB issued ASU No. 2016-02, "Leases," which requires the identification of arrangements that should be accounted for as leases by lessees. In general, for lease arrangements exceeding a twelve-month term, these arrangements must be recognized as assets and liabilities on the balance sheet of the lessee. A right-of-use asset and lease obligation will be recorded for all leases, whether operating or financing, while the income statement will reflect lease expense for operating leases and amortization/interest expense for financing leases. The balance sheet amount recorded for existing leases at the date of adoption must be calculated using the applicable incremental borrowing rate at the date of adoption. The standard requires the use of the modified retrospective transition method, which will require adjustment to all comparative periods presented. It will be effective for the Company as of January 1, 2019. Early adoption is permitted. We are currently assessing the impact that adopting this new accounting standard will have on our consolidated financial statements and footnote disclosures, but expect it to be immaterial.

Stock Compensation

On March 30, 2016, the FASB issued ASU No. 2016-09, "Compensation — Stock Compensation," which identifies areas for simplification involving several aspects of accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, an option to recognize gross stock compensation expense with actual forfeitures recognized as they occur, as well as certain

2. Significant Accounting Policies (Continued)

classifications on the statement of cash flows. The new standard also requires that all excess tax benefits and tax deficiencies that pertain to employee stock-based incentive payments be recognized within income tax expense in the consolidated statements of income, rather than as previously reported within additional paid-in capital. The new standard was adopted on January 1, 2017 and is expected to have an immaterial impact on our consolidated financial statements and footnote disclosures.

Allowance for Loan Losses

On June 16, 2016, the FASB issued ASU No. 2016-13, "Financial Instruments — Credit Losses," which requires measurement and recognition of an allowance for loan loss that estimates remaining expected credit losses for financial assets held at the reporting date. Our current allowance for loan loss is an incurred loss model. As a result, we expect the new guidance will result in an increase to our allowance for loan losses. The standard is to be applied through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The standard is effective for the Company as of January 1, 2020, and will primarily impact the allowance for loan losses related to our Private Education Loans and FFELP Loans. Early adoption is permitted on January 1, 2019. This standard represents a significant departure from existing GAAP, and may result in material changes to the Company's accounting for the allowance for loan losses. We are currently evaluating the impact of adopting this accounting standard on our consolidated financial statements and footnote disclosures.

Intra-Entity Transfer of Assets

On October 24, 2016, the FASB issued ASU No. 2016-16, "Income Taxes — Intra-Entity Transfer of Assets Other and Inventory," which requires recognition of the income tax consequences of an intra-entity transfer of non-inventory assets when the transfer occurs. The new standard is effective for the Company as of January 1, 2018. We are currently assessing the impact that adopting this new accounting standard will have on our consolidated financial statements and footnote disclosures, but expect it to be immaterial.

3. Education Loans

Education loans consist of FFELP and Private Education Loans.

There are three principal categories of FFELP Loans: Stafford, PLUS, and FFELP Consolidation Loans. Generally, Stafford and PLUS Loans have repayment periods of between five and ten years. FFELP Consolidation Loans have repayment periods of twelve to thirty years. FFELP Loans do not require repayment, or have modified repayment plans, while the customer is in-school and during the grace period immediately upon leaving school. The customer may also be granted a deferment or forbearance for a period of time based on need, during which time the customer is not considered to be in repayment. Interest continues to accrue on loans in the in-school, deferment and forbearance period. FFELP Loans obligate the customer to pay interest at a stated fixed rate or a variable rate reset annually (subject to a cap) on July 1 of each year depending on when the loan was originated and the loan type. FFELP Loans disbursed before April 1, 2006 earn interest at the greater of the borrower's rate or a floating rate based on the Special Allowance Payment ("SAP") formula, with the interest earned on the floating rate that exceeds the interest earned from the customer being paid directly by ED. In low or certain declining interest rate environments when education loans are earning at the fixed borrower rate and the interest on the funding for the loans is variable and declining, we can earn additional spread income that we refer to as Floor Income. For loans disbursed after April 1, 2006, FFELP Loans effectively only earn at the SAP rate, as the excess interest earned when the borrower rate exceeds the SAP rate (Floor Income) is required to be rebated to ED.

3. Education Loans (Continued)

FFELP Loans are insured as to their principal and accrued interest in the event of default subject to a Risk Sharing level based on the date of loan disbursement. These insurance obligations are supported by contractual rights against the United States. For loans disbursed after October 1, 1993 and before July 1, 2006, we receive 98 percent reimbursement on all qualifying default claims. For loans disbursed on or after July 1, 2006, we receive 97 percent reimbursement.

Private Education Loans bear the full credit risk of the customer. Private Education Loans generally carry a variable rate indexed to LIBOR or Prime indices. The majority of loans in our portfolio are cosigned. Similar to FFELP loans, Private Education Loans are generally non-dischargeable in bankruptcy. Most loans have repayment terms of 10 to 15 years or more, and for loans made prior to 2009, payments are typically deferred until after graduation. However, since 2009 we began to encourage interest-only or fixed payment options while the customer is enrolled in school.

The estimated weighted average life of education loans in our portfolio was approximately 7 years at both December 31, 2016 and 2015. The following table reflects the distribution of our education loan portfolio by program.

	December 31, 2016		Year Ended December 31, 2016	
(Dollars in millions)	**Ending Balance**	**% of Balance**	**Average Balance**	**Average Effective Interest Rate**
FFELP Stafford and Other Education Loans, net[1]	$ 32,319	29%	$ 34,710	2.31%
FFELP Consolidation Loans, net	55,411	50	57,787	2.98
Private Education Loans, net	23,340	21	25,361	6.26
Total education loans, net	$111,070	100%	$117,858	3.49%

	December 31, 2015		Year Ended December 31, 2015	
(Dollars in millions)	**Ending Balance**	**% of Balance**	**Average Balance**	**Average Effective Interest Rate**
FFELP Stafford and Other Education Loans, net[1]	$ 36,854	30%	$ 38,932	2.05%
FFELP Consolidation Loans, net	59,548	48	61,489	2.80
Private Education Loans, net	26,394	22	28,803	6.10
Total education loans, net	$122,796	100%	$129,224	3.31%

(1) Primarily Stafford Loans, but also includes federally guaranteed PLUS and HEAL Loans.

As of December 31, 2016 and 2015, 83 percent and 80 percent, respectively, of our education loan portfolio was in repayment.

Loan Sales

In 2015, we sold $412 million of FFELP Loans for a $12 million gain and $178 million of low-interest rate Private Education Loans for a $21 million loss. There were no loan sales in 2016.

4. Allowance for Loan Losses

Our provisions for loan losses represent the periodic expense of maintaining an allowance sufficient to absorb incurred probable losses, net of expected recoveries, in the held-for-investment loan portfolios. The evaluation of the provisions for loan losses is inherently subjective, as it requires material estimates that may be susceptible to significant changes. We believe that the allowance for loan losses is appropriate to cover probable losses incurred in the loan portfolios.

We segregate our Private Education Loan portfolio into two classes of loans — traditional and non-traditional. Non-traditional loans are loans to (i) customers attending for-profit schools with an original Fair Isaac and Company ("FICO") score of less than 670 and (ii) customers attending not-for-profit schools with an original FICO score of less than 640. The FICO score used in determining whether a loan is non-traditional is the greater of the customer or cosigner FICO score at origination. Traditional loans are defined as all other Private Education Loans that are not classified as non-traditional.

Allowance for Loan Losses Metrics

	Year Ended December 31, 2016			
(Dollars in millions)	FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 78	$ 1,471	$ 15	$ 1,564
Total provision	43	383	3	429
Charge-offs[(1)]	(54)	(513)	(3)	(570)
Reclassification of interest reserve[(2)]	—	10	—	10
Ending balance	$ 67	$ 1,351	$ 15	$ 1,433
Allowance:				
Ending balance: individually evaluated for impairment	$ —	$ 1,190	$ 11	$ 1,201
Ending balance: collectively evaluated for impairment	$ 67	$ 161	$ 4	$ 232
Loans:				
Ending balance: individually evaluated for impairment	$ —	$11,165	$ 32	$ 11,197
Ending balance: collectively evaluated for impairment	$86,918	$13,983	$ 132	$101,033
Charge-offs as a percentage of average loans in repayment	.07%	2.20%	2.10%	
Allowance coverage of charge-offs	1.2	2.6	7.0	
Allowance as a percentage of the ending total loan balance	.08%	5.37%	9.35%	
Allowance as a percentage of the ending loans in repayment	.09%	6.10%	9.35%	
Ending total loans[(3)]	$86,918	$25,148	$ 164	
Average loans in repayment	$72,714	$23,275	$ 104	
Ending loans in repayment	$70,557	$22,150	$ 164	

(1) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See "Receivable for Partially Charged-Off Private Education Loans" for further discussion.

(2) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan's principal balance.

(3) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

	Year Ended December 31, 2015			
(Dollars in millions)	FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 93	$ 1,916	$ 24	$ 2,033
Total provision	46	538	(3)	581
Net adjustment resulting from the change in the charge-off rate[1]	—	(330)	—	(330)
Net charge-offs remaining[2]	(61)	(659)	(6)	(726)
Total net charge-offs	(61)	(989)	(6)	(1,056)
Reclassification of interest reserve[3]	—	11	—	11
Loan sales	—	(5)	—	(5)
Ending balance	$ 78	$ 1,471	$ 15	$ 1,564
Allowance:				
Ending balance: individually evaluated for impairment	$ —	$ 1,209	$ 12	$ 1,221
Ending balance: collectively evaluated for impairment	$ 78	$ 262	$ 3	$ 343
Loans:				
Ending balance: individually evaluated for impairment[4]	$ —	$10,965	$ 37	$ 11,002
Ending balance: collectively evaluated for impairment[4]	$95,393	$17,431	$ 49	$112,873
Net charge-offs as a percentage of average loans in repayment, excluding the net adjustment resulting from the change in the charge-off rate (annualized)[1]	.08%	2.55%	6.17%	
Net adjustment resulting from the change in the charge-off rate as a percentage of average loans in repayment (annualized)[1]	—%	1.28%	—%	
Allowance coverage of net charge-offs, excluding the net adjustment resulting from the change in the charge-off rate (annualized)[1]	1.3	2.2	2.5	
Allowance as a percentage of the ending total loan balance	.08%	5.18%	17.28%	
Allowance as a percentage of the ending loans in repayment	.11%	6.00%	17.28%	
Ending total loans[4]	$95,393	$28,396	$ 86	
Average loans in repayment	$75,925	$25,802	$ 97	
Ending loans in repayment	$73,838	$24,502	$ 86	

(1) In the second quarter of 2015, the portion of the loan amount charged off at default on Private Education Loans increased from 73 percent to 79 percent. This did not impact the provision for loan losses as previously this had been reserved through the allowance for loan losses. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

(2) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See "Receivable for Partially Charged-Off Private Education Loans" for further discussion.

(3) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan's principal balance.

(4) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

(Dollars in millions)	Year Ended December 31, 2014 FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 119	$ 2,097	$ 28	$ 2,244
Total provision	59	588	—	647
Charge-offs[1]	(79)	(717)	(4)	(800)
Reclassification of interest reserve[2]	—	17	—	17
Distribution of SLM BankCo	(6)	(69)	—	(75)
Ending balance	$ 93	$ 1,916	$ 24	$ 2,033
Allowance:				
Ending balance: individually evaluated for impairment	$ —	$ 1,132	$ 19	$ 1,151
Ending balance: collectively evaluated for impairment	$ 93	$ 784	$ 5	$ 882
Loans:				
Ending balance: individually evaluated for impairment	$ —	$10,609	$ 45	$ 10,654
Ending balance: collectively evaluated for impairment	$103,362	$21,697	$ 62	$125,121
Charge-offs as a percentage of average loans in repayment	.11%	2.51%	3.31%	
Allowance coverage of charge-offs	1.2	2.7	6.1	
Allowance as a percentage of the ending total loan balance	.09%	5.93%	22.23%	
Allowance as a percentage of the ending loans in repayment	.12%	7.11%	22.23%	
Ending total loans[3]	$103,362	$32,306	$ 107	
Average loans in repayment	$ 72,811	$28,577	$ 117	
Ending loans in repayment	$ 78,135	$26,949	$ 107	

(1) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See "Receivable for Partially Charged-Off Private Education Loans" for further discussion.

(2) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan's principal balance.

(3) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

Key Credit Quality Indicators

FFELP Loans are substantially insured and guaranteed as to their principal and accrued interest in the event of default; therefore, the key credit quality indicator for this portfolio is loan status. The impact of changes in loan status is incorporated quarterly into the allowance for loan losses calculation.

For Private Education Loans, the key credit quality indicators are school type, FICO scores, the existence of a cosigner, the loan status and loan seasoning. The school type/FICO score are assessed at origination and maintained through the traditional/non-traditional loan designation. The other Private Education Loan key quality indicators can change and are incorporated quarterly into the allowance for loan losses calculation. The following table highlights the principal balance (excluding the receivable for partially charged-off loans) of our Private Education Loan portfolio stratified by the key credit quality indicators.

	Private Education Loans Credit Quality Indicators			
	December 31, 2016		December 31, 2015	
(Dollars in millions)	Balance[3]	% of Balance	Balance[3]	% of Balance
Credit Quality Indicators				
School Type/FICO Scores:				
Traditional	$22,367	92%	$25,280	92%
Non-Traditional[1]	1,966	8	2,235	8
Total	$24,333	100%	$27,515	100%
Cosigners:				
With cosigner	$15,610	64%	$17,738	64%
Without cosigner	8,723	36	9,777	36
Total	$24,333	100%	$27,515	100%
Seasoning[2]:				
1-12 payments	$ 1,340	5%	$ 1,776	7%
13-24 payments	1,271	5	1,977	7
25-36 payments	1,908	8	2,982	11
37-48 payments	2,723	11	3,787	14
More than 48 payments	15,698	65	14,953	54
Not yet in repayment	1,393	6	2,040	7
Total	$24,333	100%	$27,515	100%

(1) Defined as loans to customers attending for-profit schools (with a FICO score of less than 670 at origination) and customers attending not-for-profit schools (with a FICO score of less than 640 at origination).

(2) Number of months in active repayment for which a scheduled payment was received.

(3) Balance represents gross Private Education Loans.

4. Allowance for Loan Losses (Continued)

The following tables provide information regarding the loan status and aging of past due loans.

(Dollars in millions)	FFELP Loan Delinquencies December 31, 2016 Balance	%	2015 Balance	%	2014 Balance	%
Loans in-school/grace/deferment[(1)]	$ 5,871		$ 8,257		$ 10,861	
Loans in forbearance[(2)]	10,490		13,298		14,366	
Loans in repayment and percentage of each status:						
Loans current	61,977	87.8%	62,651	84.8%	65,221	83.5%
Loans delinquent 31-60 days[(3)]	2,820	4.0	3,285	4.5	3,942	5.0
Loans delinquent 61-90 days[(3)]	1,325	1.9	1,856	2.5	2,451	3.1
Loans delinquent greater than 90 days[(3)]	4,435	6.3	6,046	8.2	6,521	8.4
Total FFELP Loans in repayment	70,557	100%	73,838	100%	78,135	100%
Total FFELP Loans, gross	86,918		95,393		103,362	
FFELP Loan unamortized premium	879		1,087		1,176	
Total FFELP Loans	87,797		96,480		104,538	
FFELP Loan allowance for losses	(67)		(78)		(93)	
FFELP Loans, net	$87,730		$96,402		$104,445	
Percentage of FFELP Loans in repayment		81.2%		77.4%		75.6%
Delinquencies as a percentage of FFELP Loans in repayment		12.2%		15.2%		16.5%
FFELP Loans in forbearance as a percentage of loans in repayment and forbearance		12.9%		15.3%		15.5%

(1) Loans for customers who may still be attending school or engaging in other permitted educational activities and are not required to make payments on the loans, e.g., residency periods for medical students or a grace period for bar exam preparation, as well as loans for customers who have requested and qualify for other permitted program deferments such as military, unemployment or economic hardships.

(2) Loans for customers who have used their allowable deferment time or do not qualify for deferment, that need additional time to obtain employment or who have temporarily ceased making full payments due to hardship or other factors.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

4. Allowance for Loan Losses (Continued)

(Dollars in millions)	Traditional Private Education Loan Delinquencies — December 31, 2016 Balance	2016 %	2015 Balance	2015 %	2014 Balance	2014 %
Loans in-school/grace/deferment[1]	$ 1,271		$ 1,859		$ 2,777	
Loans in forbearance[2]	700		863		935	
Loans in repayment and percentage of each status:						
Loans current	19,020	93.3%	21,085	93.5%	23,012	92.7%
Loans delinquent 31-60 days[3]	444	2.2	491	2.2	624	2.5
Loans delinquent 61-90 days[3]	269	1.3	292	1.3	363	1.5
Loans delinquent greater than 90 days[3]	663	3.2	690	3.0	816	3.3
Total traditional loans in repayment	20,396	100%	22,558	100%	24,815	100%
Total traditional loans, gross	22,367		25,280		28,527	
Traditional loans unamortized discount	(402)		(470)		(526)	
Total traditional loans	21,965		24,810		28,001	
Traditional loans receivable for partially charged-off loans	526		560		775	
Traditional loans allowance for losses	(1,138)		(1,236)		(1,515)	
Traditional loans, net	$21,353		$24,134		$27,261	
Percentage of traditional loans in repayment		91.2%		89.2%		87.0%
Delinquencies as a percentage of traditional loans in repayment		6.7%		6.5%		7.3%
Loans in forbearance as a percentage of traditional loans in repayment and forbearance		3.3%		3.7%		3.6%

(1) Deferment includes customers who have returned to school or are engaged in other permitted educational activities and are not required to make payments on the loans, e.g., residency periods for medical students or a grace period for bar exam preparation.

(2) Loans for customers who have requested extension of grace period generally during employment transition or who have temporarily ceased making full payments due to hardship or other factors, consistent with established loan program servicing policies and procedures.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

4. Allowance for Loan Losses (Continued)

	Non-Traditional Private Education Loan Delinquencies					
	December 31,					
	2016		2015		2014	
(Dollars in millions)	Balance	%	Balance	%	Balance	%
Loans in-school/grace/deferment[1]	$ 122		$ 181		$ 276	
Loans in forbearance[2]	90		110		124	
Loans in repayment and percentage of each status:						
Loans current	1,486	84.8%	1,646	84.7%	1,749	81.9%
Loans delinquent 31-60 days[3]	78	4.5	86	4.4	110	5.2
Loans delinquent 61-90 days[3]	52	2.9	56	2.9	73	3.4
Loans delinquent greater than 90 days[3]	138	7.8	156	8.0	202	9.5
Total non-traditional loans in repayment	1,754	100%	1,944	100%	2,134	100%
Total non-traditional loans, gross	1,966		2,235		2,534	
Non-traditional loans unamortized discount	(55)		(61)		(68)	
Total non-traditional loans	1,911		2,174		2,466	
Non-traditional loans receivable for partially charged-off loans	289		321		470	
Non-traditional loans allowance for losses	(213)		(235)		(401)	
Non-traditional loans, net	$1,987		$2,260		$2,535	
Percentage of non-traditional loans in repayment		89.2%		87.0%		84.2%
Delinquencies as a percentage of non-traditional loans in repayment		15.2%		15.3%		18.1%
Loans in forbearance as a percentage of non-traditional loans in repayment and forbearance		4.9%		5.4%		5.5%

(1) Deferment includes customers who have returned to school or are engaged in other permitted educational activities and are not required to make payments on the loans, e.g., residency periods for medical students or a grace period for bar exam preparation.

(2) Loans for customers who have requested extension of grace period generally during employment transition or who have temporarily ceased making full payments due to hardship or other factors, consistent with established loan program servicing policies and procedures.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

4. Allowance for Loan Losses (Continued)

Receivable for Partially Charged-Off Private Education Loans

At the end of each month, for loans that are 212 or more days past due, we charge off the estimated loss of a defaulted loan balance. Actual recoveries are applied against the remaining loan balance that was not charged off. We refer to this remaining loan balance as the "receivable for partially charged-off loans." If actual periodic recoveries are less than expected, the difference is immediately charged off through the allowance for Private Education Loan losses with an offsetting reduction in the receivable for partially charged-off Private Education Loans. If actual periodic recoveries are greater than expected, they will be reflected as a recovery through the allowance for Private Education Loan losses once the cumulative recovery amount exceeds the cumulative amount originally expected to be recovered. The financial crisis, which began in 2007, impacted our collections on defaulted loans and as a result, Private Education Loans which defaulted from 2007 through March 31, 2015, experienced collection performance below our pre-financial crisis experience. For that reason, until we gained enough data and experience to determine the long-term, post-default recovery rate of 21 percent in second-quarter 2015, we established a reserve for potential shortfalls in recoveries. In the second quarter of 2015, the portion of the loan amount charged off at default increased from 73 percent to 79 percent. This did not impact the provision for loan losses as previously this had been reserved through the allowance for loan losses. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

The following table summarizes the activity in the receivable for partially charged-off loans.

	Years Ended December 31,		
(Dollars in millions)	**2016**	**2015**	**2014**
Receivable at beginning of period	$ 881	$1,245	$1,313
Expected future recoveries of current period defaults[1]	128	183	233
Recoveries[2]	(181)	(191)	(215)
Net adjustment resulting from the change in the charge-off rate[3]	—	(330)	—
Net charge-offs remaining[4]	(13)	(26)	(86)
Total net charge-offs[5]	(13)	(356)	(86)
Receivable at end of period	815	881	1,245
Allowance for estimated recovery shortfalls[6]	—	—	(385)
Net receivable at end of period	$ 815	$ 881	$ 860

(1) Represents the difference between the defaulted loan balance and our estimate of the amount to be collected in the future.

(2) Current period cash collections.

(3) In the second quarter of 2015, the portion of the loan amount charged off at default increased from 73 percent to 79 percent. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

(4) Represents the current period recovery shortfall — the difference between what was expected to be collected and what was actually collected.

(5) These amounts are included in total charge-offs as reported in the "Allowance for Private Education Loan Losses" table.

(6) The allowance for estimated recovery shortfalls of the receivable for partially charged-off Private Education Loans is a component of the $1.9 billion overall allowance for Private Education Loan losses as of December 31, 2014. This component of the allowance was removed in the second quarter of 2015 due to the increase in the charge-off rate discussed above.

Troubled Debt Restructurings ("TDRs")

We sometimes modify the terms of loans for certain customers when we believe such modifications may increase the ability and willingness of a customer to make payments and thus increase the ultimate overall

4. Allowance for Loan Losses (Continued)

amount collected on a loan. These modifications generally take the form of a forbearance, a temporary interest rate reduction or an extended repayment plan. For customers experiencing financial difficulty, certain Private Education Loans for which we have granted either a forbearance of greater than three months, an interest rate reduction or an extended repayment plan are classified as TDRs. Approximately 61 percent and 56 percent of the loans granted forbearance have qualified as a TDR loan at December 31, 2016, and 2015, respectively. The unpaid principal balance of TDR loans that were in an interest rate reduction plan as of December 31, 2016 and 2015 was $2.6 billion and $2.5 billion, respectively.

At December 31, 2016 and 2015, all of our TDR loans had a related allowance recorded. The following table provides the recorded investment, unpaid principal balance and related allowance for our TDR loans.

(Dollars in millions)	TDR Loans Recorded Investment[1]	Unpaid Principal Balance	Related Allowance
December 31, 2016			
Private Education Loans — Traditional	$ 9,386	$ 9,429	$1,003
Private Education Loans — Non-Traditional	1,373	1,376	187
Total	$10,759	$10,805	$1,190
December 31, 2015			
Private Education Loans — Traditional	$ 9,134	$ 9,200	$ 995
Private Education Loans — Non-Traditional	1,441	1,442	214
Total	$10,575	$10,642	$1,209

(1) The recorded investment is equal to the unpaid principal balance and accrued interest receivable net of unamortized deferred fees and costs.

The following table provides the average recorded investment and interest income recognized for our TDR loans.

	Years Ended December 31,					
	2016		2015		2014	
(Dollars in millions)	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized
Private Education Loans — Traditional	$ 9,326	$560	$ 8,976	$539	$8,139	$497
Private Education Loans — Non-Traditional	1,409	107	1,461	114	1,456	116
Total	$10,735	$667	$10,437	$653	$9,595	$613

4. Allowance for Loan Losses (Continued)

The following table provides information regarding the loan status and aging of TDR loans that are past due.

	TDR Loan Delinquencies December 31,					
	2016		2015		2014	
(Dollars in millions)	Balance	%	Balance	%	Balance	%
Loans in deferment[(1)]	$ 579		$ 706		$ 825	
Loans in forbearance[(2)]	588		694		745	
Loans in repayment and percentage of each status:						
Loans current	8,273	85.8%	7,887	85.3%	7,187	82.7%
Loans delinquent 31-60 days[(3)]	412	4.3	414	4.5	464	5.3
Loans delinquent 61-90 days[(3)]	267	2.8	263	2.9	299	3.4
Loans delinquent greater than 90 days[(3)]	686	7.1	678	7.3	746	8.6
Total TDR loans in repayment	9,638	100%	9,242	100%	8,696	100%
Total TDR loans, gross	$10,805		$10,642		$10,266	

(1) Deferment includes customers who have returned to school or are engaged in other permitted educational activities and are not required to make payments on the loans, e.g., residency periods for medical students or a grace period for bar exam preparation.

(2) Loans for customers who have requested extension of grace period generally during employment transition or who have temporarily ceased making full payments due to hardship or other factors, consistent with established loan program servicing policies and procedures.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

The following table provides the amount of loans modified in the periods presented that resulted in a TDR. Additionally, the table summarizes charge-offs occurring in the TDR portfolio, as well as TDRs for which a payment default occurred in the current period within 12 months of the loan first being designated as a TDR. We define payment default as 60 days past due for this disclosure.

	Years Ended December 31,								
	2016			2015			2014		
(Dollars in millions)	Modified Loans[(1)]	Charge-Offs[(2)]	Payment-Default	Modified Loans[(1)]	Charge-Offs[(2)]	Payment-Default	Modified Loans[(1)]	Charge-Offs[(2)]	Payment-Default
Private Education Loans — Traditional	$1,079	$302	$226	$1,464	$351	$342	$1,858	$332	$449
Private Education Loans — Non-Traditional	90	80	39	140	108	61	206	107	100
Total	$1,169	$382	$265	$1,604	$459	$403	$2,064	$439	$549

(1) Represents period ending balance of loans that have been modified during the period and resulted in a TDR.

(2) Represents loans that charged off that were classified as TDRs.

4. Allowance for Loan Losses (Continued)

Accrued Interest Receivable

The following table provides information regarding accrued interest receivable on our Private Education Loans.

(Dollars in millions)	Accrued Interest Receivable As of December 31, Total	Greater Than 90 Days Past Due	Allowance for Uncollectible Interest
2016			
Private Education Loans — Traditional	$344	$26	$23
Private Education Loans — Non-Traditional	47	7	7
Total	$391	$33	$30
2015			
Private Education Loans — Traditional	$433	$27	$26
Private Education Loans — Non-Traditional	57	8	9
Total	$490	$35	$35
2014			
Private Education Loans — Traditional	$542	$31	$29
Private Education Loans — Non-Traditional	70	10	11
Total	$612	$41	$40

5. Business Combinations, Goodwill and Acquired Intangible Assets

Business Combinations

Acquisitions are accounted for under the acquisition method of accounting as defined in ASC 805, “Business Combinations.” The Company allocates the purchase price to the fair value of the acquired tangible assets, liabilities and identifiable intangible assets as of the acquisition date as determined by an independent appraiser.

Acquisition of Gila LLC

During February 2015, the Company acquired a 98 percent majority controlling interest in Gila LLC for approximately $185 million. Gila LLC is an asset recovery and business processing firm. The firm provides services to state governments, agencies, court systems and municipalities. The results of operations of Gila LLC have been included in Navient’s consolidated financial statements since the acquisition date and are reflected in Navient’s Business Services segment. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the years ended December 31, 2016 and 2015, as the pro forma impact was deemed immaterial.

As of September 2015, the Company finalized its purchase price allocation for Gila LLC which resulted in an excess purchase price over the fair value of net assets acquired, or goodwill, of $97 million.

Identifiable intangible assets at the acquisition date included the Gila LLC trade name, initially classified as an indefinite life intangible asset, with an aggregate fair value of approximately $13 million as of the acquisition

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

date. Definite life intangible assets with an estimated aggregate fair value of approximately $71 million as of the acquisition date consist primarily of customer relationships. These intangible assets will be amortized over 7 to 16 years depending on the estimated economic benefit derived from each of the underlying assets.

Acquisition of Xtend Healthcare

During October 2015, Navient acquired an 89 percent controlling interest in Xtend Healthcare for approximately $164 million. Xtend Healthcare is a health care revenue cycle management company that provides health insurance claims billing and account resolution, as well as patient billing and customer service. The results of operations of Xtend Healthcare have been included in Navient's consolidated financial statements since the acquisition date and are reflected in Navient's Business Services segment. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the years ended December 31, 2016 and 2015, as the pro forma impact was deemed immaterial.

As of June 2016, the Company finalized its purchase price allocation for Xtend Healthcare which resulted in an excess purchase price over the fair value of net assets acquired, or goodwill, of $102 million.

Identifiable intangible assets at the acquisition date included definite life intangible assets with an estimated aggregate fair value of approximately $65 million primarily including customer relationships, developed technology, and the Xtend Healthcare trade name. These intangible assets will be amortized over a period of 10 to 15 years based on the estimated economic benefit derived from each of the underlying assets.

Goodwill

All acquisitions must be assigned to a reporting unit or units. A reporting unit is the same as, or one level below, an operating segment. We have four reportable segments: FFELP Loans, Private Education Loans, Business Services and Other. The following table summarizes our goodwill, accumulated impairments and net goodwill for our reporting units and reportable segments.

	As of December 31, 2016			As of December 31, 2015		
(Dollars in millions)	Gross	Accumulated Impairments and Other Adjustments(1)	Net	Gross	Accumulated Impairments and Other Adjustments(1)	Net
FFELP Loans reportable segment	$194	$ (4)	$190	$194	$ (4)	$190
Private Education Loans reportable segment(1)	147	(41)	106	147	(41)	106
Business Services reportable segment:						
Servicing	50	—	50	50	—	50
Asset Recovery — Contingency	136	(136)	0	136	(129)	7
Asset Recovery — Gila LLC	97	—	97	97	—	97
Asset Recovery — Xtend Healthcare	102	—	102	101	—	101
Total Business Services reportable segment	385	(136)	249	384	(129)	255
Total	$726	$(181)	$545	$725	$(174)	$551

(1) In conjunction with our Separation from SLM BankCo in 2014, we removed $41 million of goodwill from our balance sheet as required under ASC 350, "Intangibles — Goodwill and Other." This goodwill was allocated to the consumer banking business retained by SLM BankCo based on relative fair value.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

Annual Goodwill Impairment Testing — October 1, 2016

We perform our goodwill impairment testing annually in the fourth quarter as of October 1. As part of the 2016 annual impairment testing, we retained a third-party appraisal firm to assist in the valuations required to perform Step 1 impairment testing of goodwill associated with our FFELP Loans, Private Education Loans and Servicing reporting units. The income approach was the primary approach used to estimate the fair value of these reporting units. No goodwill was deemed impaired in 2016 in conjunction with these reporting units.

The income approach measures the value of each reporting unit's future economic benefit determined by its discounted cash flows derived from our projections plus an assumed terminal growth rate adjusted for what we believe a market participant would assume in an acquisition. These projections are generally five-year projections that reflect the anticipated cash flow fluctuations of the respective reporting units. If a component of a reporting unit is winding down or is assumed to wind down, the projections extend through the anticipated wind-down period and no residual value is ascribed.

Under our guidance, the third-party appraisal firm developed the discount rate for each reporting unit incorporating such factors as the risk free rate, a market rate of return, a measure of volatility (Beta) and a company-specific and capital markets risk premium, as appropriate, to adjust for volatility and uncertainty in the economy and to capture specific risk related to the respective reporting units. We considered whether an asset sale or an equity sale would be the most likely sale structure for each reporting unit and valued each reporting unit based on the more likely hypothetical scenario. The discount rates reflect market-based estimates of capital costs and are adjusted for our assessment of a market participant's view with respect to execution, source concentration and other risks associated with the projected cash flows of individual reporting units. We reviewed and approved the discount rates provided by the third-party appraiser including the factors incorporated to develop the discount rates for each reporting unit.

We and the third-party appraisal firm also considered a market approach for each reporting unit. Market-based multiples for comparable publicly traded companies and similar transactions were evaluated as an indicator of the value of the reporting units to assess the reasonableness of the estimated fair value derived from the income approach. As of October 1, 2016 and December 31, 2016, our market capitalization was 20 percent and 28 percent higher than book equity, respectively,

The following table illustrates the carrying value of equity for our FFELP Loans, Private Education Loans and Servicing reporting units and the percentage by which the estimated fair value determined in conjunction with Step 1 impairment testing in the fourth quarter of 2016 exceeds the carrying value of equity.

(Dollars in millions)	Carrying Value of Equity	% of Fair Value in Excess of Carrying Value
FFELP Loans	$ 773	95%
Private Education Loans	2,380	14%
Servicing	71	1,263%

With respect to the Contingency, Gila and Xtend reporting units, we considered factors associated with Navient as a whole, such as market capitalization in excess of our book equity, our 2016 earnings, 2017 expectations and analyst's expectations regarding our stock price. We also considered factors specific to the individual reporting units including but not limited to 2016 earnings, 2017 expectations, current customer base and revenue backlog as well as short and long term outlook. No goodwill was deemed impaired for the Gila and Xtend reporting units after assessing these relevant qualitative factors. With respect to the Contingency reporting

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

unit, further assessment was warranted due primarily to revenue declines stemming from the wind-down nature of the Contingency reporting unit's existing education loan asset recovery business. As a result, the Contingency reporting unit's remaining goodwill of $7 million was impaired.

We acknowledge that a downturn in the economy coupled with liquidity constraints, and changes in legislation and the regulatory environment could adversely affect the operating results of our reporting units. If the forecasted performance of our reporting units is not achieved, or if our stock price declines resulting in deterioration in our total market capitalization, the fair value of one or more of the reporting units could be significantly reduced, and we may be required to record a charge, which could be material, for an impairment of goodwill associated with these reporting units.

Acquired Intangible Assets

Acquired intangible assets include the following:

	As of December 31, 2016			As of December 31, 2015		
(Dollars in millions)	**Cost Basis[1]**	**Accumulated Impairment and Amortization[1]**	**Net**	**Cost Basis[1]**	**Accumulated Impairment and Amortization[1]**	**Net**
Customer, services and lending relationships	$292	$(219)	$ 73	$305	$(202)	$103
Favorable lease	1	—	1	1	—	1
Non-competes	2	(2)	—	2	(1)	1
Software and technology	101	(82)	19	91	(78)	13
Trade names and trademarks[2]	44	(13)	31	42	(6)	36
Total acquired intangible assets	$440	$(316)	$124	$441	$(287)	$154

(1) Accumulated impairment and amortization includes impairment amounts only if the acquired intangible asset has been deemed partially impaired. When an acquired intangible asset is considered fully impaired and no longer in use, the cost basis and any accumulated amortization related to the asset is written off.

(2) During 2016 we reclassified certain trade names from indefinite life to definite life intangible assets and began to amortize these assets over their expected benefit period.

We recorded amortization of acquired intangible assets from continuing operations totaling $29 million, $12 million and $9 million in 2016, 2015 and 2014, respectively. We will continue to amortize our intangible assets with definite useful lives over their remaining estimated useful lives. We estimate amortization expense associated with these intangible assets will be $23 million, $20 million, $17 million, $14 million and $51 million in 2017, 2018, 2019, 2020 and after 2020, respectively.

6. Borrowings

Borrowings consist of secured borrowings issued through our securitization program, borrowings through secured facilities, unsecured notes issued by us, and other interest-bearing liabilities related primarily to obligations to return cash collateral held. To match the interest rate and currency characteristics of our borrowings with the interest rate and currency characteristics of our assets, we enter into interest rate and foreign currency swaps with independent parties. Under these agreements, we make periodic payments, generally indexed to the related asset rates or rates which are highly correlated to the asset rates, in exchange for periodic payments which generally match our interest obligations on fixed or variable rate notes (see "Note 7 — Derivative Financial Instruments"). Payments and receipts on our interest rate and currency swaps are not reflected in the following tables.

6. Borrowings (Continued)

The following table summarizes our borrowings.

(Dollars in millions)	December 31, 2016 Short Term	December 31, 2016 Long Term	December 31, 2016 Total	December 31, 2015 Short Term	December 31, 2015 Long Term	December 31, 2015 Total
Unsecured borrowings:						
Senior unsecured debt	$ 717	$ 13,029	$ 13,746	$1,120	$ 13,976	$ 15,096
Total unsecured borrowings	717	13,029	13,746	1,120	13,976	15,096
Secured borrowings:						
FFELP Loan securitizations	—	73,522	73,522	—	77,764	77,764
Private Education Loan securitizations[1]	548	14,125	14,673	—	16,900	16,900
FFELP Loan — other facilities	—	12,443	12,443	—	16,276	16,276
Private Education Loan — other facilities	464	—	464	710	—	710
Other[2]	606	—	606	760	—	760
Total secured borrowings	1,618	100,090	101,708	1,470	110,940	112,410
Total before hedge accounting adjustments	2,335	113,119	115,454	2,590	124,916	127,506
Hedge accounting adjustments	(1)	(751)	(752)	(20)	(83)	(103)
Total	$2,334	$112,368	$114,702	$2,570	$124,833	$127,403

(1) Includes $548 million and $0 of short-term debt related to the Private Education Loan asset-backed securitization repurchase facility ("Repurchase Facility") as of December 31, 2016 and 2015, respectively. Includes $475 million and $546 million of long-term debt related to the Repurchase Facility as of December 31, 2016 and 2015, respectively.

(2) "Other" primarily includes the obligation to return cash collateral held related to derivative exposures, which includes $193 million of securities re-pledged subject to an overnight repurchase transaction.

Short-term Borrowings

Short-term borrowings have a remaining term to maturity of one year or less. The following tables summarize outstanding short-term borrowings (secured and unsecured), the weighted average interest rates at the end of each period, and the related average balances and weighted average interest rates during the periods.

(Dollars in millions)	December 31, 2016 Ending Balance	December 31, 2016 Weighted Average Interest Rate	Year Ended December 31, 2016 Average Balance	Year Ended December 31, 2016 Weighted Average Interest Rate
Private Education Loan securitizations	$ 548	3.72%	$ 42	3.81%
FFELP Loan — other facilities	—	—	—	—
Private Education Loan — other facilities	464	2.02	389	1.83
Senior unsecured debt	716	4.22	1,032	5.01
Other interest-bearing liabilities	606	.96	629	.48
Total short-term borrowings	$2,334	2.82%	$2,092	3.03%
Maximum outstanding at any month end	$2,637			

6. Borrowings (Continued)

	December 31, 2015		Year Ended December 31, 2015	
(Dollars in millions)	**Ending Balance**	**Weighted Average Interest Rate**	**Average Balance**	**Weighted Average Interest Rate**
Private Education Loan securitizations	$ —	—%	$ —	—%
FFELP Loan — other facilities	—	—	8	.28
Private Education Loan —other facilities	710	1.47	636	1.29
Senior unsecured debt	1,100	5.97	1,625	5.42
Other interest-bearing liabilities	760	.20	898	.13
Total short-term borrowings	$2,570	3.02%	$3,167	3.08%
Maximum outstanding at any month end	$4,710			

Long-term Borrowings

The following tables summarize outstanding long-term borrowings, the weighted average interest rates at the end of the periods, and the related average balances during the periods.

	December 31, 2016		Year Ended December 31, 2016
(Dollars in millions)	**Ending Balance[(1)]**	**Weighted Average Interest Rate[(2)]**	**Average Balance**
Floating rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2017-2083	$ 88,575	1.65%	$ 93,881
Non-U.S. dollar-denominated:			
Interest bearing, due 2023-2041	7,265	.28	8,761
Total floating rate notes	95,840	1.54	102,642
Fixed rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2018-2058	16,271	5.65	16,050
Non-U.S.-dollar denominated:			
Interest bearing, due 2034-2035	257	2.82	281
Total fixed rate notes	16,528	5.60	16,331
Total long-term borrowings	$112,368	2.14%	$118,973

6. Borrowings (Continued)

(Dollars in millions)	December 31, 2015 Ending Balance[1]	December 31, 2015 Weighted Average Interest Rate[2]	Year Ended December 31, 2015 Average Balance
Floating rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2017-2058	$ 98,926	1.13%	$103,037
Non-U.S. dollar-denominated:			
Interest bearing, due 2023-2041	8,169	.47	8,601
Total floating rate notes	107,095	1.08	111,638
Fixed rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2017-2047	17,488	5.52	17,252
Non-U.S.-dollar denominated:			
Interest bearing, due 2034-2035	250	2.89	927
Total fixed rate notes	17,738	5.48	18,179
Total long-term borrowings	$124,833	1.71%	$129,817

(1) Ending balance is expressed in U.S. dollars using the spot currency exchange rate. Includes fair value adjustments under hedge accounting for notes designated as the hedged item in a fair value hedge.

(2) Weighted average interest rate is stated rate relative to currency denomination of debt.

As of December 31, 2016, the stated maturities of our long-term borrowings are shown in the following table.

(Dollars in millions)	Stated Maturity Senior Unsecured Debt	Secured Borrowings[1]	Total[2]
Year of Maturity			
2017	$ —	$ 14,221	$ 14,221
2018	2,047	10,747	12,794
2019	2,361	7,662	10,023
2020	2,036	9,010	11,046
2021	1,288	7,498	8,786
2022-2083	5,297	50,952	56,249
	13,029	100,090	113,119
Hedge accounting adjustments	450	(1,201)	(751)
Total	$13,479	$ 98,889	$112,368

(1) We view our securitization trust debt as long-term based on the contractual maturity dates and have projected the expected principal paydowns based on our current estimates regarding the securitized loans' prepayment speeds. The projected principal paydowns in year 2017 include $14.2 billion related to the securitization trust debt.

(2) The aggregate principal amount of debt that matures in each period is $14.3 billion in 2017, $12.9 billion in 2018, $10.1 billion in 2019, $11.1 billion in 2020, $8.9 billion in 2021 and $56.8 billion in 2022-2083.

6. Borrowings (Continued)

Variable Interest Entities

We consolidate the following financing VIEs as of December 31, 2016 and 2015, as we are the primary beneficiary. As a result, these VIEs are accounted for as secured borrowings.

	December 31, 2016						
	Debt Outstanding			Carrying Amount of Assets Securing Debt Outstanding			
(Dollars in millions)	Short Term	Long Term	Total	Loans	Cash	Other Assets, Net	Total
Secured Borrowings — VIEs:							
FFELP Loan securitizations	$ —	$73,522	$73,522	$ 74,197	$2,676	$ 778	$ 77,651
Private Education Loan securitizations[1]	548	14,125	14,673	19,815	455	260	20,530
FFELP Loan — other facilities	—	9,046	9,046	9,232	289	172	9,693
Private Education Loan — other facilities	464	—	464	685	10	14	709
Other	66	—	66	79	4	—	83
Total before hedge accounting adjustments	1,078	96,693	97,771	104,008	3,434	1,224	108,666
Hedge accounting adjustments	—	(1,201)	(1,201)	—	—	(1,235)	(1,235)
Total	$1,078	$95,492	$96,570	$104,008	$3,434	$ (11)	$107,431

	December 31, 2015						
	Debt Outstanding			Carrying Amount of Assets Securing Debt Outstanding			
(Dollars in millions)	Short Term	Long Term	Total	Loans	Cash	Other Assets, Net	Total
Secured Borrowings — VIEs:							
FFELP Loan securitizations	$ —	$ 77,764	$ 77,764	$ 78,358	$2,760	$ 682	$ 81,800
Private Education Loan securitizations	—	16,900	16,900	22,014	452	323	22,789
FFELP Loan — other facilities	—	12,676	12,676	13,158	324	168	13,650
Private Education Loan — other facilities	710	—	710	1,110	17	31	1,158
Total before hedge accounting adjustments	710	107,340	108,050	114,640	3,553	1,204	119,397
Hedge accounting adjustments	—	(830)	(830)	—	—	(911)	(911)
Total	$710	$106,510	$107,220	$114,640	$3,553	$ 293	$118,486

(1) Includes $548 million of short-term debt, $475 million of long-term debt and $49 million of restricted cash related to the Repurchase Facility as of December 31, 2016. Includes $546 million of long-term debt and $41 million of restricted cash related to the Repurchase Facility as of December 31, 2015.

Securitizations

Private Education Loan ABS Repurchase Facilities

In fourth-quarter 2015, we closed on a $550 million Private Education Loan ABS Repurchase Facility that matures in December 2017, and in second-quarter 2016, we closed on a second $478 million Private Education

6. Borrowings (Continued)

Loan ABS Repurchase Facility that matures in April 2018. Both repurchase facilities are collateralized by Residual Interests in previously issued Private Education Loan ABS trusts. The lenders also have unsecured recourse to Navient Corporation as guarantor for any shortfall in amounts payable. Because these facilities are secured by the Residual Interests in previous securitizations, we show the debt and assets as part of Private Education Loan securitizations in the Secured Borrowings table above.

FFELP Loans — Other Secured Borrowing Facilities

We have various secured borrowing facilities that we use to finance our FFELP Loans. Liquidity is available under these secured credit facilities to the extent we have eligible collateral and available capacity. The maximum borrowing capacity under these facilities will vary and is subject to each agreement's borrowing conditions. These include but are not limited to the facility's size, current usage and the availability and fair value of qualifying unencumbered FFELP Loan collateral. Our borrowings under these facilities are non-recourse. The maturity dates on these facilities range from March 2018 to December 2020. The interest rate on certain facilities can increase under certain circumstances. The facilities are subject to termination under certain circumstances. As of December 31, 2016, there was approximately $12.4 billion outstanding under these facilities, with approximately $13.8 billion of assets securing these facilities. As of December 31, 2016, the maximum unused capacity under these facilities was $2.2 billion. As of December 31, 2016, we had $0.4 billion of unencumbered FFELP Loans.

On December 22, 2015, we received notice from the Federal Home Loan Bank of Des Moines ("FHLB") that availability under their facility would be reduced from approximately $10.7 billion to approximately $5 billion from December 22, 2015 to October 31, 2016, and to approximately $3.6 billion thereafter. In addition, in January 2016 we were informed this facility will mature in the first quarter of 2021. Both of these actions were taken by the FHLB in relation to the publication in January 2016 of new rules by the Federal Home Finance Agency, the primary regulator of the FHLB, governing eligibility of, and borrowing capacity for, certain insurance companies who are existing members of the Federal Home Loan Bank system. As of December 31, 2016, the maximum capacity and the amount outstanding under this facility was $3.4 billion and we do not expect to borrow more than this amount in the future.

Private Education Loans — Other Secured Borrowing Facilities

In addition to the FFELP Loan — other facilities, liquidity may also be available from our Private Education Loan asset-backed commercial paper ("ABCP") facility. This facility provides liquidity for Private Education Loan acquisitions and for the refinancing of loans presently on our balance sheet or in other short-term facilities. On June 27, 2016, this facility was renewed and extended from its original maturity date of June 30, 2016 to June 26, 2017. This facility's maximum financing amount, which was originally $1 billion, is now $750 million. At December 31, 2016, the available capacity under this facility was $285 million. Borrowing under this facility will vary and is subject to the availability of qualifying collateral from unencumbered Private Education Loans.

Other Funding Sources

Senior Unsecured Debt

We issued $1.3 billion, $500 million and $1.9 billion of unsecured debt in 2016, 2015 and 2014, respectively.

6. Borrowings (Continued)

Debt Repurchases

The following table summarizes activity related to our senior unsecured debt and ABS repurchases. "Gains on debt repurchases" is shown net of hedging-related gains and losses.

	Years Ended December 31,		
(Dollars in millions)	2016	2015	2014
Debt principal repurchased	$1,467	$1,744	$548
Gains on debt repurchases	1	21	—

7. Derivative Financial Instruments

Risk Management Strategy

We maintain an overall interest rate risk management strategy that incorporates the use of derivative instruments to minimize the economic effect of interest rate changes. Our goal is to manage interest rate sensitivity by modifying the repricing frequency and underlying index characteristics of certain balance sheet assets and liabilities so the net interest margin is not, on a material basis, adversely affected by movements in interest rates. We do not use derivative instruments to hedge credit risk. As a result of interest rate fluctuations, hedged assets and liabilities will appreciate or depreciate in market value. Income or loss on the derivative instruments that are linked to the hedged assets and liabilities will generally offset the effect of this unrealized appreciation or depreciation for the period the item is being hedged. We view this strategy as a prudent management of interest rate sensitivity. In addition, we utilize derivative contracts to minimize the economic impact of changes in foreign currency exchange rates on certain debt obligations that are denominated in foreign currencies. As foreign currency exchange rates fluctuate, these liabilities will appreciate and depreciate in value. These fluctuations, to the extent the hedge relationship is effective, are offset by changes in the value of the cross-currency interest rate swaps executed to hedge these instruments. Management believes certain derivative transactions entered into as hedges, primarily Floor Income Contracts and basis swaps, are economically effective; however, those transactions generally do not qualify for hedge accounting under GAAP (as discussed below) and thus may adversely impact earnings.

Although we use derivatives to offset (or minimize) the risk of interest rate and foreign currency changes, the use of derivatives does expose us to both market and credit risk. Market risk is the chance of financial loss resulting from changes in interest rates, foreign exchange rates and market liquidity. Credit risk is the risk that a counterparty will not perform its obligations under a contract and it is limited to the loss of the fair value gain in a derivative that the counterparty owes us. When the fair value of a derivative contract is negative, we owe the counterparty and, therefore, have no credit risk exposure to the counterparty; however, the counterparty has exposure to us. We minimize the credit risk in derivative instruments by entering into transactions with highly rated counterparties that are reviewed regularly by our Credit Department. We also maintain a policy of requiring that all derivative contracts be governed by an International Swaps and Derivative Association Master Agreement. Depending on the nature of the derivative transaction, bilateral collateral arrangements related to Navient Corporation contracts generally are required as well. When we have more than one outstanding derivative transaction with the counterparty, and there exists legally enforceable netting provisions with the counterparty (i.e., a legal right to offset receivable and payable derivative contracts), the "net" mark-to-market exposure, less collateral the counterparty has posted to us, represents exposure with the counterparty. When there is a net negative exposure, we consider our exposure to the counterparty to be zero. At December 31, 2016 and 2015, we had a net positive exposure (derivative gain positions to us less collateral which has been posted by counterparties to us) related to Navient Corporation derivatives of $110 million and $85 million, respectively.

7. Derivative Financial Instruments (Continued)

Our on-balance sheet securitization trusts have $8.5 billion of Euro and British Pound Sterling denominated bonds outstanding as of December 31, 2016. To convert these non-U.S. dollar denominated bonds into U.S. dollar liabilities, the trusts have entered into foreign-currency swaps with highly — rated counterparties. In addition, the trusts have entered into $10.2 billion notional of interest rates swaps which are primarily used to convert Prime received on securitized education loans to LIBOR paid on the bonds. Our securitization trusts with swaps have ISDA documentation with protections against counterparty risk. The collateral calculations contemplated in the ISDA documentation of our securitization trusts require collateral based on the fair value of the derivative which may be adjusted for additional collateral based on rating agency criteria requirements considered within the collateral agreement. The trusts are not required to post collateral to the counterparties. At December 31, 2016 and 2015, the net positive exposure on swaps in securitization trusts was $9 million and $8 million, respectively.

Accounting for Derivative Instruments

Derivative instruments that are used as part of our interest rate and foreign currency risk management strategy include interest rate swaps, basis swaps, cross-currency interest rate swaps, and interest rate floor contracts with indices that relate to the pricing of specific balance sheet assets and liabilities. The accounting for derivative instruments requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded on the balance sheet as either an asset or liability measured at its fair value. As more fully described below, if certain criteria are met, derivative instruments are classified and accounted for by us as either fair value or cash flow hedges. If these criteria are not met, the derivative financial instruments are accounted for as trading.

Fair Value Hedges

Fair value hedges are generally used by us to hedge the exposure to changes in fair value of a recognized fixed rate asset or liability. We enter into interest rate swaps to economically convert fixed rate assets into variable rate assets and fixed rate debt into variable rate debt. We also enter into cross-currency interest rate swaps to economically convert foreign currency denominated fixed and floating debt to U.S. dollar denominated variable debt. For fair value hedges, we generally consider all components of the derivative's gain and/or loss when assessing hedge effectiveness and generally hedge changes in fair values due to interest rates or interest rates and foreign currency exchange rates.

Cash Flow Hedges

We use cash flow hedges to hedge the exposure to variability in cash flows for a forecasted debt issuance and for exposure to variability in cash flows of floating rate debt. This strategy is used primarily to minimize the exposure to volatility from future changes in interest rates. Gains and losses on the effective portion of a qualifying hedge are recorded in accumulated other comprehensive income and ineffectiveness is recorded immediately to earnings. In the case of a forecasted debt issuance, gains and losses are reclassified to earnings over the period which the stated hedged transaction affects earnings. If we determine it is not probable that the anticipated transaction will occur, gains and losses are reclassified immediately to earnings. In assessing hedge effectiveness, generally all components of each derivative's gains or losses are included in the assessment. We generally hedge exposure to changes in cash flows due to changes in interest rates or total changes in cash flow.

7. Derivative Financial Instruments (Continued)

Trading Activities

When derivative instruments do not qualify as hedges, they are accounted for as trading instruments where all changes in fair value are recorded through earnings. We sell interest rate floors (Floor Income Contracts) to hedge the embedded Floor Income options in education loan assets. The Floor Income Contracts are written options which have a more stringent hedge effectiveness hurdle to meet. Specifically, our Floor Income Contracts do not qualify for hedge accounting treatment because the pay down of principal of the education loans underlying the Floor Income embedded in those education loans does not exactly match the change in the notional amount of our written Floor Income Contracts. Additionally, the term, the interest rate index and the interest rate index reset frequency of the Floor Income Contracts can be different from that of the education loans. Therefore, Floor Income Contracts do not qualify for hedge accounting treatment, and are recorded as trading instruments. Regardless of the accounting treatment, we consider these contracts to be economic hedges for risk management purposes. We use this strategy to minimize our exposure to changes in interest rates.

We use basis swaps to minimize earnings variability caused by having different reset characteristics on our interest-earning assets and interest-bearing liabilities. The specific terms and notional amounts of the swaps are determined based on a review of our asset/liability structure, our assessment of future interest rate relationships, and on other factors such as short-term strategic initiatives. Hedge accounting requires that when using basis swaps, the change in the cash flows of the hedge effectively offset both the change in the cash flows of the asset and the change in the cash flows of the liability. Our basis swaps hedge variable interest rate risk; however, they generally do not meet this effectiveness criterion because the index of the swap does not exactly match the index of the hedged assets. Additionally, some of our FFELP Loans can earn at either a variable or a fixed interest rate depending on market interest rates and, therefore, swaps economically hedging these FFELP Loans do not meet the criteria for hedge accounting treatment. As a result, these swaps are recorded at fair value with changes in fair value reflected currently in the statement of income.

Summary of Derivative Financial Statement Impact

The following tables summarize the fair values and notional amounts or number of contracts of all derivative instruments at December 31, 2016 and 2015, and their impact on other comprehensive income and earnings for 2016, 2015 and 2014.

7. Derivative Financial Instruments (Continued)

Impact of Derivatives on Consolidated Balance Sheet

(Dollars in millions)	Hedged Risk Exposure	Cash Flow Dec. 31, 2016	Cash Flow Dec. 31, 2015	Fair Value Dec. 31, 2016	Fair Value Dec. 31, 2015	Trading Dec. 31, 2016	Trading Dec. 31, 2015	Total Dec. 31, 2016	Total Dec. 31, 2015
Fair Values[1]									
Derivative Assets:									
Interest rate swaps	Interest rate	$ 78	$ —	$ 465	$ 694	$ 22	$ 32	$ 565	$ 726
Cross-currency interest rate swaps	Foreign currency and interest rate	—	—	—	2	—	—	—	2
Total derivative assets[2]		78	—	465	696	22	32	565	728
Derivative Liabilities:									
Interest rate swaps	Interest rate	(76)	(89)	(62)	(3)	(70)	(68)	(208)	(160)
Floor Income Contracts	Interest rate	—	—	—	—	(184)	(365)	(184)	(365)
Cross-currency interest rate swaps	Foreign currency and interest rate	—	—	(1,243)	(926)	(53)	(62)	(1,296)	(988)
Other[3]	Interest rate	—	—	—	—	(13)	(2)	(13)	(2)
Total derivative liabilities[2]		(76)	(89)	(1,305)	(929)	(320)	(497)	(1,701)	(1,515)
Net total derivatives		$ 2	$(89)	$ (840)	$(233)	$(298)	$(465)	$(1,136)	$ (787)

(1) Fair values reported are exclusive of collateral held and pledged and accrued interest. Assets and liabilities are presented without consideration of master netting agreements. Derivatives are carried on the balance sheet based on net position by counterparty under master netting agreements, and classified in other assets or other liabilities depending on whether in a net positive or negative position.

(2) The following table reconciles gross positions with the impact of master netting agreements to the balance sheet classification:

(Dollar in millions)	Other Assets December 31, 2016	Other Assets December 31, 2015	Other Liabilities December 31, 2016	Other Liabilities December 31, 2015
Gross position	$ 565	$ 728	$(1,701)	$(1,515)
Impact of master netting agreements	(31)	(50)	31	50
Derivative values with impact of master netting agreements (as carried on balance sheet)	534	678	(1,670)	(1,465)
Cash collateral (held) pledged	(345)	(759)	319	466
Net position, as presented on the balance sheet	$ 189	$ (81)	$(1,351)	$ (999)

(3) "Other" includes embedded derivatives bifurcated from securitization debt as well as derivatives related to our Total Return Swap Facility.

7. Derivative Financial Instruments (Continued)

The above fair values include adjustments for counterparty credit risk for both when we are exposed to the counterparty, net of collateral postings, and when the counterparty is exposed to us, net of collateral postings. The net adjustments decreased the overall net asset positions at December 31, 2016 and 2015 by $0 and $1 million, respectively. In addition, the above fair values reflect adjustments for illiquid derivatives as indicated by a wide bid/ask spread in the interest rate indices to which the derivatives are indexed. These adjustments decreased the overall net asset positions at December 31, 2016 and 2015 by $31 million and $31 million, respectively.

	Cash Flow		Fair Value		Trading		Total	
(Dollars in billions)	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015
Notional Values:								
Interest rate swaps	$15.2	$9.5	$11.8	$12.6	$23.8	$33.8	$50.8	$ 55.9
Floor Income Contracts	—	—	—	—	18.5	35.1	18.5	35.1
Cross-currency interest rate swaps	—	—	8.5	9.1	.3	.3	8.8	9.4
Other[1]	—	—	—	—	2.6	3.2	2.6	3.2
Total derivatives	$15.2	$9.5	$20.3	$21.7	$45.2	$72.4	$80.7	$103.6

(1) "Other" includes embedded derivatives bifurcated from securitization debt, as well as derivatives related to our Total Return Swap Facility.

7. Derivative Financial Instruments (Continued)

Impact of Derivatives on Consolidated Statements of Income

	Years Ended December 31,											
	Unrealized Gain (Loss) on Derivatives[1][2]			Realized Gain (Loss) on Derivatives[3]			Unrealized Gain (Loss) on Hedged Item[1]			Total Gain (Loss)		
(Dollars in millions)	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Fair Value Hedges:												
Interest rate swaps	$(288)	$(115)	$ 213	$ 259	$ 345	$ 389	$302	$ 140	$ (185)	$273	$370	$417
Cross-currency interest rate swaps	(319)	(794)	(1,159)	(86)	(7)	52	350	921	1,264	(55)	120	157
Total fair value derivatives	(607)	(909)	(946)	173	338	441	652	1,061	1,079	218	490	574
Cash Flow Hedges:												
Interest rate swaps	—	—	—	(50)	—	(3)	—	—	—	(50)	—	(3)
Total cash flow derivatives	—	—	—	(50)	—	(3)	—	—	—	(50)	—	(3)
Trading:												
Interest rate swaps	(13)	61	54	42	42	46	—	—	—	29	103	100
Floor Income Contracts	297	557	633	(246)	(650)	(699)	—	—	—	51	(93)	(66)
Cross-currency interest rate swaps	9	2	(33)	(4)	(4)	(2)	—	—	—	5	(2)	(35)
Other	(10)	9	9	(3)	(3)	(2)	—	—	—	(13)	6	7
Total trading derivatives	283	629	663	(211)	(615)	(657)	—	—	—	72	14	6
Total	(324)	(280)	(283)	(88)	(277)	(219)	652	1,061	1,079	240	504	577
Less: realized gains (losses) recorded in interest expense	—	—	—	123	338	438	—	—	—	123	338	438
Gains (losses) on derivative and hedging activities, net	$(324)	$(280)	$ (283)	$(211)	$(615)	$(657)	$652	$1,061	$1,079	$117	$166	$139

(1) Recorded in "Gains (losses) on derivative and hedging activities, net" in the consolidated statements of income.

(2) Represents ineffectiveness related to cash flow hedges.

(3) For fair value and cash flow hedges, recorded in interest expense. For trading derivatives, recorded in "Gains (losses) on derivative and hedging activities, net."

7. Derivative Financial Instruments (Continued)

Impact of Derivatives on Consolidated Statements of Changes in Stockholders' Equity (net of tax)

(Dollars in millions)	Years Ended December 31, 2016	2015	2014
Total gains (losses) on cash flow hedges	$26	$(59)	$(7)
Realized (gains) losses recognized in interest expense[1][2][3]	31	(1)	2
Total change in stockholders' equity for unrealized gains (losses) on derivatives	$57	$(60)	$(5)

(1) Amounts included in "Realized gain (loss) on derivatives" in the "Impact of Derivatives on Consolidated Statements of Income" table above.

(2) Includes net settlement income/expense.

(3) We expect to reclassify $1 million of after-tax net losses from accumulated other comprehensive income to earnings during the next 12 months related to amortization of terminated hedge relationships.

Collateral

The following table details collateral held and pledged related to derivative exposure between us and our derivative counterparties.

(Dollars in millions)	December 31, 2016	December 31, 2015
Collateral held:		
Cash (obligation to return cash collateral is recorded in short-term borrowings)[1]	$ 345	$ 759
Securities at fair value — corporate derivatives (not recorded in financial statements)[2]	193	—
Securities at fair value — on-balance sheet securitization derivatives (not recorded in financial statements)[3]	230	301
Total collateral held	$ 768	$1,060
Derivative asset at fair value including accrued interest	$ 689	$ 896
Collateral pledged to others:		
Cash (right to receive return of cash collateral is recorded in investments)	$ 319	$ 466
Total collateral pledged	$ 319	$ 466
Derivative liability at fair value including accrued interest and premium receivable	$1,670	$1,395

(1) At December 31, 2016 and 2015, $0 and $2 million, respectively, were held in restricted cash accounts.

(2) The Company has the ability to sell or re-pledge securities it holds as collateral.

(3) The trusts do not have the ability to sell or re-pledge securities they hold as collateral.

Our corporate derivatives contain credit contingent features. At our current unsecured credit rating, we have fully collateralized our corporate derivative liability position (including accrued interest and net of premiums receivable) of $408 million with our counterparties. Downgrades in our unsecured credit rating would not result in any additional collateral requirements, except to increase the frequency of collateral calls. Trust related derivatives do not contain credit contingent features related to our or the trusts' credit ratings.

8. Other Assets

The following table provides the detail of our other assets.

(Dollars in millions)	December 31, 2016	December 31, 2015
Accrued interest receivable, net	$1,663	$1,637
Income tax asset, net current and deferred	725	945
Derivatives at fair value	534	678
Benefit and insurance-related investments	488	491
Fixed assets, net	160	162
Other loans, net	148	70
Accounts receivable	95	329
Other	380	400
Total	$4,193	$4,712

9. Stockholders' Equity

Common Stock

Our shareholders have authorized the issuance of 1.125 billion shares of common stock. The par value of Navient common stock is $0.01 per share. At December 31, 2016, 291 million shares were issued and outstanding and 23 million shares were unissued but encumbered for outstanding stock options, restricted stock units and dividend equivalent units for employee compensation and remaining authority for stock-based compensation plans. The stock-based compensation plans are described in "Note 11 — Stock-Based Compensation Plans and Arrangements."

In April 2014, in connection with the Spin-Off, SLM Corporation retired 127 million shares of common stock held in treasury. This retirement decreased the balance in treasury stock by $2.3 billion, with corresponding decreases of $25 million in common stock and $2.3 billion in additional paid-in capital. There was no impact to total equity from this retirement.

Dividend and Share Repurchase Program

In 2016, we paid full-year common stock dividends of $0.64 per share, compared with $0.64 in 2015 and $0.60 in 2014.

In 2014, we repurchased 30.4 million shares of common stock for $600 million (8.3 million shares for $200 million pre-Spin-Off, and 22.1 million shares for $400 million post-Spin-Off).

In 2015, we repurchased 56.0 million shares of common stock for $945 million.

In 2016, we repurchased 59.6 million shares of common stock for $755 million, fully utilizing our share repurchase programs. In December 2016, our board of directors authorized a new $600 million share repurchase program effective January 1, 2017.

9. Stockholders' Equity (Continued)

The following table summarizes our common share repurchases and issuances.

	Years Ended December 31,		
	2016	2015	2014
Common stock repurchased[1]	59,625,325	56,043,711	30,432,689
Average purchase price per share	$ 12.68	$ 16.87	$ 19.72
Shares repurchased related to employee stock-based compensation plans[2]	3,197,355	2,404,328	4,171,342
Average purchase price per share	$ 13.21	$ 19.81	$ 20.91
Common shares issued[3]	5,476,010	4,924,021	7,389,962

(1) Common shares purchased under our share repurchase program.

(2) Comprises shares withheld from stock option exercises and vesting of restricted stock for employees' tax withholding obligations and shares tendered by employees to satisfy option exercise costs.

(3) Common shares issued under our various compensation and benefit plans.

The closing price of our common stock on December 31, 2016 was $16.43.

10. Earnings (Loss) per Common Share

Basic earnings (loss) per common share ("EPS") are calculated using the weighted average number of shares of common stock outstanding during each period. A reconciliation of the numerators and denominators of the basic and diluted EPS calculations follows.

	Years Ended December 31,		
(In millions, except per share data)	2016	2015	2014
Numerator:			
Net income attributable to Navient Corporation	$ 681	$ 984	$1,137
Preferred stock dividends	—	—	6
Net income attributable to Navient Corporation common stock	$ 681	$ 984	$1,131
Denominator:			
Weighted average shares used to compute basic EPS	316	376	417
Effect of dilutive securities:			
Dilutive effect of stock options, restricted stock, restricted stock units and Employee Stock Purchase Plan ("ESPP")[1]	6	6	8
Dilutive potential common shares[2]	6	6	8
Weighted average shares used to compute diluted EPS	322	382	425
Basic earnings per common share attributable to Navient Corporation	$2.15	$2.62	$ 2.71
Diluted earnings per common share attributable to Navient Corporation	$2.12	$2.58	$ 2.66

(1) Includes the potential dilutive effect of additional common shares that are issuable upon exercise of outstanding stock options, restricted stock, restricted stock units, and the outstanding commitment to issue shares under the ESPP, determined by the treasury stock method.

(2) For the years ended December 31, 2016, 2015 and 2014, stock options covering approximately 4 million, 6 million and 3 million shares, respectively, were outstanding but not included in the computation of diluted earnings per share because they were anti-dilutive.

11. Stock-Based Compensation Plans and Arrangements

In connection with the Spin-Off, SLM BankCo assumed the equity incentive plans of SLM Corporation and outstanding awards granted thereunder, as well as the ESPP of SLM Corporation. Following the Spin-Off, Navient established a new equity incentive plan and a new ESPP with respect to its common stock. In order to maintain the intrinsic value of outstanding equity awards prior to the distribution, certain adjustments to the exercise price and number of awards were made. In general, holders of awards granted prior to 2014 received both adjusted SLM BankCo and new Navient equity awards, and holders of awards granted in 2014 received solely equity awards of their post-distribution employer. Outstanding stock options, restricted stock, restricted stock units and dividend equivalent units were adjusted into equity in the new companies by a specific conversion ratio per company, which was based upon the volume weighted average prices for each company leading up to the time of the separation, to keep the intrinsic value of the equity awards constant. These adjustments were accounted for as modifications to the original awards. In general, the SLM BankCo and Navient awards are subject to substantially the same terms and conditions as the original SLM Corporation awards. A comparison of the fair value of the modified awards with the fair value of the original awards immediately before the modification resulted in an immaterial amount of incremental compensation expense which was recorded immediately.

We have one active stock-based incentive plan that provides for grants of equity awards to our employees and non-employee directors in various forms including stock options, restricted stock awards, restricted stock units and performance stock units. We also maintain an ESPP. Shares issued under these plans may be either shares reacquired by us or shares that are authorized but unissued. Our Navient Corporation 2014 Omnibus Incentive Plan was effective on April 7, 2014 and 45 million shares are authorized to be issued from this plan as of December 31, 2016. Our Navient Corporation ESPP was effective on May 1, 2014 and 1 million shares are authorized to be issued from this plan as of December 31, 2016.

For most awards, expense generally is recognized ratably over the vesting period net of estimated forfeitures, unless the employee meets certain retirement eligibility criteria. For employee awards that meet retirement eligibility criteria, we record the expense generally upon grant and for employees that become retirement eligible during the vesting period, we recognize expense from the grant date to the date on which the employee becomes retirement eligible. The total stock-based compensation cost recognized in 2016, 2015 and 2014 was $26 million, $29 million and $39 million, respectively. As of December 31, 2016, there was $18 million of total unrecognized compensation expense related to unvested stock awards, which is expected to be recognized over a weighted average period of 1.7 years.

Stock Options

The exercise price of stock options equals the fair market value of our common stock on the date of grant. The maximum contractual term for stock options is 5 years for grants made since 2012, and 10 years for grants made prior to 2012. Most stock options are time-vested, with one-third vesting per year beginning with the first anniversary of the grant date.

11. Stock-Based Compensation Plans and Arrangements (Continued)

The fair values of the options granted in the years ended December 31, 2016, 2015 and 2014 were estimated as of the grant date using a Black-Scholes option pricing model with the following weighted average assumptions (information for the 2014 period prior to the Spin-Off is based on stock option awards for SLM Corporation common stock):

	Years Ended December 31,			
	2016	2015	2014 Post-Spin-Off	2014 Pre-Spin-Off
Expected life of the option	3.0 years	2.9 years	2.9 years	2.9 years
Expected volatility	30%	22%	27%	26%
Risk-free interest rate	.90%	.95%	.81%	.76%
Expected dividend rate	6.97%	2.99%	3.53%	2.48%
Weighted average fair value of options granted	$ 1.01	$ 2.22	$ 2.29	$ 3.48

The expected life is based in general on observed historical exercise patterns of SLM Corporation's employees pre-Spin-Off (excluding employees who transitioned to SLM Bank) and Navient's employees post-Spin-Off. The expected volatility is based in general on implied volatility from publicly-traded options on our stock at the grant date and historical volatility of both our stock and our peer group consistent with the expected life of the option. The risk-free interest rate is based on the U.S. Treasury spot rate at the grant date consistent with the expected life of the option. The dividend yield is based on the projected annual dividend payment per share based on the dividend amount at the grant date, divided by the stock price at the grant date.

The following table summarizes Navient's stock option activity in 2016.

(Dollars in millions, except per share data)	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value[(1)]
Outstanding at December 31, 2015	15,761,488	$14.56		
Granted	3,837,609	9.18		
Exercised[(2)]	(2,988,087)	10.17		
Canceled	(1,699,006)	28.63		
Outstanding at December 31, 2016[(3)]	14,912,004	12.45	2.5 yrs.	$76
Exercisable at December 31, 2016	9,228,819	$12.27	1.8 yrs.	$48

(1) The aggregate intrinsic value represents the total intrinsic value (the aggregate difference between our closing stock price on December 31, 2016 and the exercise price of in-the-money options) that would have been received by the option holders if all in-the-money options had been exercised on December 31, 2016.

(2) The total intrinsic value of SLM Corporation stock options exercised during periods prior to the Spin-Off was $23 million for 2014. The total intrinsic value of Navient stock options exercised subsequent to the Spin-Off was $13 million, $19 million and $23 million for 2016, 2015 and 2014, respectively.

(3) As of December 31, 2016, there was $1 million of unrecognized compensation cost related to stock options, which is expected to be recognized over a weighted average period of 1.8 years.

Restricted Stock

Restricted stock awards generally are granted to non-employee directors and generally vest upon the director's election to the board. Outstanding restricted stock is entitled to dividend equivalent units that vest subject to the same vesting requirements or lapse of transfer restrictions, as applicable, as the underlying restricted stock award. The fair value of restricted stock awards is based on our stock price at the grant date.

11. Stock-Based Compensation Plans and Arrangements (Continued)

The following table summarizes Navient's restricted stock activity in 2016.

	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2015	—	$ —
Granted	87,144	9.18
Vested[1]	(76,251)	9.18
Canceled	(10,893)	9.18
Non-vested at December 31, 2016[2]	—	$ —

(1) The total fair value of SLM Corporation shares that vested during periods prior to the Spin-Off was $1 million for 2014. The total fair value of Navient shares that vested subsequent to the Spin-Off was $1 million, $1 million and $1 million for 2016, 2015 and 2014, respectively.

(2) As of December 31, 2016, there was no unrecognized compensation cost related to restricted stock.

Restricted Stock Units and Performance Stock Units

Restricted stock units ("RSUs") and performance stock units ("PSUs") are equity awards granted to employees that entitle the holder to shares of our common stock when the award vests. RSUs generally are time-vested, with one-third vesting per year beginning with the first anniversary of the grant date, while PSUs vest based on achieving certain corporate performance goals over a three-year performance period. Outstanding RSUs and PSUs are entitled to dividend equivalent units that vest subject to the same vesting requirements or lapse of transfer restrictions, as applicable, as the underlying award. The fair value of RSUs and PSUs is based on our stock price at the grant date.

The following table summarizes Navient's RSU and PSU activity in 2016.

	Number of RSUs/ PSUs	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2015	3,672,229	$16.15
Granted	2,864,435	9.23
Vested and converted to common stock[1]	(2,109,162)	14.30
Canceled	(55,126)	12.11
Outstanding at December 31, 2016[2]	4,372,376	$12.56

(1) The total fair value of SLM Corporation RSUs and PSUs that vested and converted to common stock during periods prior to the Spin-Off was $35 million for 2014. The total fair value of Navient RSUs and PSUs that vested and converted to common stock subsequent to the Spin-Off was $30 million, $29 million and $1 million for 2016, 2015 and 2014, respectively.

(2) As of December 31, 2016, there was $16 million of unrecognized compensation cost related to RSUs and PSUs, which is expected to be recognized over a weighted average period of 1.7 years.

12. Fair Value Measurements

We use estimates of fair value in applying various accounting standards for our financial statements. We categorize our fair value estimates based on a hierarchical framework associated with three levels of price transparency utilized in measuring financial instruments at fair value.

12. Fair Value Measurements (Continued)

Education Loans

Our FFELP Loans and Private Education Loans are accounted for at cost or at the lower of cost or market if the loan is held-for-sale. Fair values were determined by modeling loan cash flows using stated terms of the assets and internally-developed assumptions to determine aggregate portfolio yield, net present value and average life.

FFELP Loans

The significant assumptions used to determine fair value of our FFELP Loans are prepayment speeds, default rates, cost of funds, capital levels and expected Repayment Borrower Benefits to be earned. In addition, the Floor Income component of our FFELP Loan portfolio is valued with option models using both observable market inputs and internally developed inputs. A number of significant inputs into the models are internally derived and not observable to market participants. While the resulting fair value can be validated against market transactions where we are a participant, these markets are not considered active. As such, these are level 3 valuations.

Private Education Loans

The significant assumptions used to determine fair value of our Private Education Loans are prepayment speeds, default rates, recovery rates, cost of funds and capital levels. A number of significant inputs into the models are internally derived and not observable to market participants nor can the resulting fair values be validated against market transactions. While the resulting fair value can be validated against market transactions where we are a participant, these markets are not considered active. As such, these are level 3 valuations.

Cash and Investments (Including "Restricted Cash and Investments")

Cash and cash equivalents are carried at cost. Carrying value approximates fair value. Investments classified as trading or available-for-sale are carried at fair value in the financial statements. Investments in mortgage-backed securities are valued using observable market prices. These securities are primarily collateralized by real estate properties and are guaranteed by either a government sponsored enterprise or the U.S. government. Other investments for which observable prices from active markets are not available were valued through standard bond pricing models using observable market yield curves adjusted for credit and liquidity spreads. These valuations are immaterial to the overall investment portfolio. The fair value of investments in commercial paper, asset-backed commercial paper, or demand deposits that have a remaining term of less than 90 days when purchased are estimated to equal their cost and, when needed, adjustments for liquidity and credit spreads are made depending on market conditions and counterparty credit risks. No additional adjustments were deemed necessary. These are level 2 valuations.

Borrowings

Borrowings are accounted for at cost in the financial statements except when denominated in a foreign currency or when designated as the hedged item in a fair value hedge relationship. When the hedged risk is the benchmark interest rate (which for us is LIBOR) and not full fair value, the cost basis is adjusted for changes in value due to benchmark interest rates only. Foreign currency-denominated borrowings are re-measured at current spot rates in the financial statements. The full fair value of all borrowings is disclosed. Fair value was determined through standard bond pricing models and option models (when applicable) using the stated terms of the borrowings, observable yield curves, foreign currency exchange rates, volatilities from active markets or from

12. Fair Value Measurements (Continued)

quotes from broker-dealers. Fair value adjustments for unsecured corporate debt are made based on indicative quotes from observable trades and spreads on credit default swaps specific to the Company. Fair value adjustments for secured borrowings are based on indicative quotes from broker-dealers. These adjustments for both secured and unsecured borrowings are material to the overall valuation of these items and, currently, are based on inputs from inactive markets. As such, these are level 3 valuations.

Derivative Financial Instruments

All derivatives are accounted for at fair value in the financial statements. The fair value of a majority of derivative financial instruments was determined by standard derivative pricing and option models using the stated terms of the contracts and observable market inputs. In some cases, we utilized internally developed inputs that are not observable in the market, and as such, classified these instruments as level 3 fair values. Complex structured derivatives or derivatives that trade in less liquid markets require significant estimates and judgment in determining fair value that cannot be corroborated with market transactions.

When determining the fair value of derivatives, we take into account counterparty credit risk for positions where there is exposure to the counterparty on a net basis by assessing exposure net of collateral held. The net exposures for each counterparty are adjusted based on market information available for the specific counterparty, including spreads from credit default swaps. When the counterparty has exposure to us under derivatives with us, we fully collateralize the exposure, minimizing the adjustment necessary to the derivative valuations for our credit risk. While trusts that contain derivatives are not required to post collateral, when the counterparty is exposed to the trust the credit quality and securitized nature of the trusts minimizes any adjustments for the counterparty's exposure to the trusts. The net credit risk adjustment (adjustments for our exposure to counterparties net of adjustments for the counterparties' exposure to us) did not decrease the valuations at December 31, 2016.

Inputs specific to each class of derivatives disclosed in the table below are as follows:

- Interest rate swaps — Derivatives are valued using standard derivative cash flow models. Derivatives that swap fixed interest payments for LIBOR interest payments (or vice versa) and derivatives swapping quarterly reset LIBOR for daily reset LIBOR or one-month LIBOR were valued using the LIBOR swap yield curve which is an observable input from an active market. These derivatives are level 2 fair value estimates in the hierarchy. Other derivatives swapping LIBOR interest payments for another variable interest payment (primarily Prime) or swapping interest payments based on the Consumer Price Index for LIBOR interest payments are valued using the LIBOR swap yield curve and observable market spreads for the specified index. The markets for these swaps are generally illiquid as indicated by a wide bid/ask spread. The adjustment made for liquidity decreased the valuations by $31 million at December 31, 2016. These derivatives are level 3 fair value estimates.
- Cross-currency interest rate swaps — Derivatives are valued using standard derivative cash flow models. Derivatives hedging foreign-denominated bonds are valued using the LIBOR swap yield curve (for both USD and the foreign-denominated currency), cross-currency basis spreads and forward foreign currency exchange rates. The derivatives are primarily British Pound Sterling and Euro denominated. These inputs are observable inputs from active markets. Therefore, the resulting valuation is a level 2 fair value estimate. Amortizing notional derivatives (derivatives whose notional amounts change based on changes in the balance of, or pool of, assets or debt) hedging trust debt use internally derived assumptions for the trust assets' prepayment speeds and default rates to model the notional amortization. Management makes assumptions concerning the extension features of derivatives hedging rate-reset notes denominated in a foreign currency. These inputs are not market observable; therefore, these derivatives are level 3 fair value estimates.

12. Fair Value Measurements (Continued)

- Floor Income Contracts — Derivatives are valued using an option pricing model. Inputs to the model include the LIBOR swap yield curve and LIBOR interest rate volatilities. The inputs are observable inputs in active markets and these derivatives are level 2 fair value estimates.

The carrying value of borrowings designated as the hedged item in a fair value hedge is adjusted for changes in fair value due to benchmark interest rates and foreign-currency exchange rates. These valuations are determined through standard bond pricing models and option models (when applicable) using the stated terms of the borrowings, and observable yield curves, foreign currency exchange rates and volatilities.

The following table summarizes the valuation of our financial instruments that are marked-to-market on a recurring basis. During 2016 and 2015, there were no significant transfers of financial instruments between levels.

	Fair Value Measurements on a Recurring Basis							
	December 31, 2016				December 31, 2015			
(Dollars in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets								
Available-for-sale investments:								
Agency residential mortgage-backed securities	$—	$ 1	$ —	$ 1	$—	$ 1	$ —	$ 1
Other	—	2	—	2	—	4	—	4
Total available-for-sale investments	—	3	—	3	—	5	—	5
Derivative instruments:[1]								
Interest rate swaps	—	553	12	565	—	709	17	726
Cross-currency interest rate swaps	—	—	—	—	—	—	2	2
Other	—	—	—	—	—	—	—	—
Total derivative assets(2)	—	553	12	565	—	709	19	728
Total	$—	$ 556	$ 12	$ 568	$—	$ 714	$ 19	$ 733
Liabilities[3]								
Derivative instruments[1]								
Interest rate swaps	$—	$(150)	$ (58)	$ (208)	$—	$ (99)	$ (61)	$ (160)
Floor Income Contracts	—	(184)	—	(184)	—	(365)	—	(365)
Cross-currency interest rate swaps	—	(53)	(1,243)	(1,296)	—	(83)	(905)	(988)
Other	—	—	(13)	(13)	—	—	(2)	(2)
Total derivative liabilities(2)	—	(387)	(1,314)	(1,701)	—	(547)	(968)	(1,515)
Total	$—	$(387)	$(1,314)	$(1,701)	$—	$(547)	$(968)	$(1,515)

(1) Fair value of derivative instruments excludes accrued interest and the value of collateral.

(2) See "Note 7 — Derivative Financial Instruments" for a reconciliation of gross positions without the impact of master netting agreements to the balance sheet classification.

(3) Borrowings which are the hedged items in a fair value hedge relationship and which are adjusted for changes in value due to benchmark interest rates only are not carried at full fair value and are not reflected in this table.

12. Fair Value Measurements (Continued)

The following tables summarize the change in balance sheet carrying value associated with level 3 financial instruments carried at fair value on a recurring basis.

	Year Ended December 31, 2016			
	Derivative Instruments			
(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
Balance, beginning of period	$(44)	$ (903)	$ (2)	$ (949)
Total gains/(losses) (realized and unrealized):				
Included in earnings[1]	3	(428)	(14)	(439)
Included in other comprehensive income	—	—	—	—
Settlements	3	88	3	94
Transfers in and/or out of level 3[2]	(8)	—	—	(8)
Balance, end of period	$(46)	$(1,243)	$(13)	$(1,302)
Change in unrealized gains/(losses) relating to instruments still held at the reporting date[3]	$ 7	$ (340)	$(11)	$ (344)

	Year Ended December 31, 2015			
	Derivative Instruments			
(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
Balance, beginning of period	$(88)	$(117)	$(11)	$(216)
Total gains/(losses) (realized and unrealized):				
Included in earnings[1]	39	(796)	6	(751)
Included in other comprehensive income	—	—	—	—
Settlements	5	10	3	18
Transfers in and/or out of level 3	—	—	—	—
Balance, end of period	$(44)	$(903)	$ (2)	$(949)
Change in unrealized gains/(losses) relating to instruments still held at the reporting date[3]	$ 37	$(783)	$ 9	$(737)

12. Fair Value Measurements (Continued)

(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
	Year Ended December 31, 2014			
	Derivative Instruments			
Balance, beginning of period	$(87)	$ 1,007	$(21)	$ 899
Total gains/(losses) (realized and unrealized):				
Included in earnings[(1)]	1	(1,081)	8	(1,072)
Included in other comprehensive income	—	—	—	—
Settlements	(2)	(43)	2	(43)
Transfers in and/or out of level 3	—	—	—	—
Balance, end of period	$(88)	$ (117)	$(11)	$ (216)
Change in unrealized gains/(losses) relating to instruments still held at the reporting date[(3)]	$ —	$(1,225)	$ 10	$(1,215)

(1) "Included in earnings" is comprised of the following amounts recorded in the specified line item in the consolidated statements of income:

(Dollars in millions)	Years Ended December 31, 2016	2015	2014
Gains (losses) on derivative and hedging activities, net	$(351)	$(741)	$(1,116)
Interest expense	(88)	(10)	44
Total	$(439)	$(751)	$(1,072)

(2) Consumer Price Index/LIBOR basis swaps were transferred from level 3 to level 2 as of the beginning of the fourth quarter of 2016 due to the conclusion that these swaps now trade in an active market.

(3) Recorded in "gains (losses) on derivative and hedging activities, net" in the consolidated statements of income.

The following table presents the significant inputs that are unobservable or from inactive markets used in the recurring valuations of the level 3 financial instruments detailed above.

(Dollars in millions)	Fair Value at December 31, 2016	Valuation Technique	Input	Range (Weighted Average)
Derivatives				
Prime/LIBOR basis swaps	$ (46)	Discounted cash flow	Constant Prepayment Rate	4.9%
			Bid/ask adjustment to discount rate	.05% — .05% (.05%)
Cross-currency interest rate swaps	(1,243)	Discounted cash flow	Constant Prepayment Rate	3.3%
Other	(13)			
Total	$(1,302)			

The significant inputs that are unobservable or from inactive markets related to our level 3 derivatives detailed in the table above would be expected to have the following impacts to the valuations:

- Prime/LIBOR basis swaps — These swaps do not actively trade in the markets as indicated by a wide bid/ask spread. A wider bid/ask spread will result in a decrease in the overall valuation. In addition, the unobservable inputs include Constant Prepayment Rates of the underlying securitization trust the swap

12. Fair Value Measurements (Continued)

references. A decrease in this input will result in a longer weighted average life of the swap which will increase the value for swaps in a gain position and decrease the value for swaps in a loss position, everything else equal. The opposite is true for an increase in the input.

- Cross-currency interest rate swaps — The unobservable inputs used in these valuations are Constant Prepayment Rates of the underlying securitization trust the swap references. A decrease in this input will result in a longer weighted average life of the swap. All else equal in a typical currency market, this will result in a decrease to the valuation due to the delay in the cash flows of the currency exchanges as well as diminished liquidity in the forward exchange markets as you increase the term. The opposite is true for an increase in the input.

The following table summarizes the fair values of our financial assets and liabilities, including derivative financial instruments.

	December 31, 2016			December 31, 2015		
(Dollars in millions)	Fair Value	Carrying Value	Difference	Fair Value	Carrying Value	Difference
Earning assets						
FFELP Loans	$ 86,626	$ 87,730	$(1,104)	$ 94,281	$ 96,402	$(2,121)
Private Education Loans	23,191	23,340	(149)	25,772	26,394	(622)
Cash and investments[(1)]	5,203	5,203	—	5,833	5,833	—
Total earning assets	115,020	116,273	(1,253)	125,886	128,629	(2,743)
Interest-bearing liabilities						
Short-term borrowings	2,346	2,334	(12)	2,569	2,570	1
Long-term borrowings	109,826	112,368	2,542	118,471	124,833	6,362
Total interest-bearing liabilities	112,172	114,702	2,530	121,040	127,403	6,363
Derivative financial instruments						
Floor Income Contracts	(184)	(184)	—	(365)	(365)	—
Interest rate swaps	357	357	—	566	566	—
Cross-currency interest rate swaps	(1,296)	(1,296)	—	(986)	(986)	—
Other	(13)	(13)	—	(2)	(2)	—
Excess of net asset fair value over carrying value			$ 1,277			$ 3,620

(1) "Cash and investments" includes available-for-sale investments whose cost basis is $3 million and $4 million at December 31, 2016 and 2015, respectively, versus a fair value of $3 million and $5 million at December 31, 2016 and 2015, respectively.

13. Commitments, Contingencies and Guarantees

Legal Proceedings

The Company has been named as defendant in a number of putative class action cases alleging violations of various state and federal consumer protection laws. One of these putative class action suits is *Randy Johnson v. Navient Solutions, Inc.* On May 4, 2015, Randy Johnson filed a putative class action in the United States District Court for the Southern District of Indiana alleging violations of the Telephone Consumer Protection Act ("TCPA"). During the fourth quarter of 2016, the parties entered into a settlement agreement and on December 23, 2016, filed a Motion to Approve the Class Action Settlement with the Court. The Court preliminarily approved the settlement on January 26, 2017. We have denied all claims asserted against the Company, but agreed to settle the case to avoid the burden, expense, risk and uncertainty of continued litigation. A reserve has been established for this matter as of December 31, 2016.

13. Commitments, Contingencies and Guarantees (Continued)

On January 18, 2017, the CFPB and Attorneys General for the State of Illinois and the State of Washington (collectively the "Attorneys General") initiated civil actions naming Navient Corporation and several of its subsidiaries as defendants alleging violations of Federal and State consumer protection statutes, including the Consumer Financial Protection Act of 2010, the Fair Credit Reporting Act, the Fair Debt Collection Practices Act and various State consumer protection laws. For additional information on these civil actions, please refer to section entitled "Regulatory Matters" below.

Regulatory Matters

On May 2, 2014, Navient Solutions, Inc., now known as Navient Solutions, LLC ("Solutions"), a wholly-owned subsidiary of Navient, and Sallie Mae Bank entered into consent orders, without admitting any wrongdoing, with the Federal Deposit Insurance Corporation (the "FDIC") (respectively, the "Solutions Order" and the "Bank Order"; collectively, the "FDIC Orders") to settle matters related to certain cited violations of Section 5 of the Federal Trade Commission Act, including the disclosures and assessments of certain late fees, as well as alleged violations under the Servicemembers Civil Relief Act (the "SCRA"). The FDIC Orders, which became effective upon the signing of the consent order with the United States Department of Justice (the "DOJ") by Solutions and SLM BankCo on May 13, 2014, required Solutions to pay $3.3 million in civil monetary penalties. Solutions paid its civil monetary penalties. In addition, the FDIC Orders required the establishment of a restitution reserve account totaling $30 million to provide restitution with respect to loans owned or originated by Sallie Mae Bank, from November 28, 2005 until the effective date of the FDIC Orders. Pursuant to the Separation and Distribution Agreement among SLM Corporation, SLM BankCo and Navient dated as of April 28, 2014 (the "Separation Agreement"), Navient funded the restitution reserve account in May 2014. While the FDIC issued its final exam report in December 2016, we are unable at this point in time to predict the timing of when the FDIC will lift the consent order.

The Solutions Order also required Solutions to ensure proper servicing for service members and proper application of SCRA benefits under a revised and broader definition of eligibility than previously required by the statute and regulatory guidance and to make changes to billing statements and late fee practices. These changes to billing statements and late fee practices have already been implemented. Solutions also decided to voluntarily make restitution of certain late fees to all other customers whose loans were neither owned nor originated by Sallie Mae Bank. They were calculated in the same manner as that which was required under the FDIC Orders and are estimated to be $42 million. The process to refund these fees as well as distribute amounts from the restitution fund is complete.

With respect to alleged civil violations of the SCRA, Solutions and Sallie Mae Bank entered into a consent order with the DOJ in May 2014. The DOJ consent order (the "DOJ Order") covers all loans either owned by Sallie Mae Bank or serviced by Solutions from November 28, 2005 until the effective date of the settlement. The DOJ Order required Solutions to fund a $60 million settlement fund, which represents the total amount of compensation due to service members under the DOJ agreement, and to pay $55,000 in civil penalties. The DOJ Order was approved by the United States District Court in Delaware on September 29, 2014 and has a term of four years. Shortly thereafter, Navient funded the settlement fund and paid the civil money penalties pursuant to the terms of the order. The funds were disbursed beginning in the second quarter of 2015. In the third quarter of 2016, the Company completed the distributions from the fund by distributing the remaining funds to charities approved by the DOJ.

The total reserves established by the Company in 2013 and 2014 to cover these costs were $177 million, and as of December 31, 2016, substantially all of this amount had been paid or credited or refunded to customer accounts. The final cost of these proceedings will remain uncertain until all of the work under the various consent orders has been completed and the consent orders are lifted.

13. Commitments, Contingencies and Guarantees (Continued)

As previously disclosed, the Company and various of its subsidiaries have been subject to the following investigations and inquiries:

- In December 2013, Navient received Civil Investigative Demands ("CIDs") issued by the State of Illinois Office of Attorney General and the State of Washington Office of the Attorney General and multiple other state Attorneys General. According to the CIDs, the investigations were initiated to ascertain whether any practices declared to be unlawful under the Consumer Fraud and Deceptive Business Practices Act have occurred or are about to occur.
- In April 2014, Solutions received a CID from the Consumer Financial Protection Bureau (the "CFPB") as part of the CFPB's separate investigation regarding allegations relating to Navient's disclosures and assessment of late fees and other matters. Navient has received a series of supplemental CIDs on these matters. On August 19, 2015, Solutions received a letter from the CFPB notifying Solutions that, in accordance with the CFPB's discretionary Notice and Opportunity to Respond and Advise ("NORA") process, the CFPB's Office of Enforcement is considering recommending that the CFPB take legal action against Solutions. The NORA letter relates to a previously disclosed investigation into Solutions' disclosures and assessment of late fees and other matters and states that, in connection with any action, the CFPB may seek restitution, civil monetary penalties and corrective action against Solutions. The Company responded to the NORA letter on September 10, 2015.
- In November 2014, Navient's subsidiary, Pioneer Credit Recovery, Inc. ("Pioneer"), received a CID from the CFPB as part of the CFPB's investigation regarding Pioneer's activities relating to rehabilitation loans and collection of defaulted student debt. The CFPB has informed the Company that they have combined this matter with the aforementioned servicing matter.
- In December 2014, Solutions received a subpoena from the New York Department of Financial Services (the "NY DFS") as part of the NY DFS's inquiry with regard to whether persons or entities have engaged in fraud or misconduct with respect to a financial product or service under New York Financial Services Law or other laws.

On January 18, 2017, the CFPB and Attorneys General for the State of Illinois and the State of Washington (collectively the "Attorneys General") initiated civil actions naming Navient Corporation (the "Company") and several of its subsidiaries as defendants alleging violations of Federal and State consumer protection statutes, including the Consumer Financial Protection Act of 2010, the Fair Credit Reporting Act, the Fair Debt Collection Practices Act and various state consumer protection laws. These civil actions are related to the aforementioned CIDs and the NORA letter that were previously issued by the CFPB and the Attorneys General. In addition to these matters, a number of lawsuits have been or may be filed by additional governmental or nongovernmental parties seeking damages or other remedies related to similar issues raised by the CFPB and the Attorneys General. As the Company has previously stated, we believe the suit improperly seeks to impose penalties on Navient based on new servicing standards applied retroactively and applied only against one servicer and that the allegations are false. We intend to vigorously defend against the allegations. At this point in time, the Company is unable to anticipate the timing of a resolution or the ultimate impact that these legal proceedings may have on the Company's consolidated financial position, liquidity, results of operation or cash flows. As a result, it is not possible at this time to estimate a range of potential exposure, if any, for amounts that may be payable in connection with these matters and reserves have not been established. It is possible that an adverse ruling or rulings may have a material adverse impact on the Company.

In addition, Navient and its subsidiaries are subject to examination or regulation by the SEC, CFPB, FDIC, ED and various state agencies as part of its ordinary course of business. Items or matters similar to or different from those described above may arise during the course of those examinations. We also routinely receive inquiries or requests from various regulatory entities or bodies or government agencies concerning our business or our assets. The Company endeavors to cooperate with each such inquiry or request.

13. Commitments, Contingencies and Guarantees (Continued)

Under the terms of the Separation Agreement, Navient has agreed to indemnify SLM BankCo for all claims, actions, damages, losses or expenses that may arise from the conduct of all activities of pre-Spin-Off SLM BankCo occurring prior to the Spin-Off other than those specifically excluded in the Separation and Distribution Agreement. As a result, liabilities arising out of the regulatory matters and CFPB and State Attorneys General lawsuits mentioned above, other than fines or penalties directly levied against Sallie Mae Bank and other matters specifically excluded, are the responsibility of, or assumed by, Navient or one of its subsidiaries, and Navient has agreed to indemnify and hold harmless Sallie Mae and its subsidiaries, including Sallie Mae Bank, therefrom. Navient has no additional reserves related to indemnification matters with SLM BankCo as of December 31, 2016.

OIG Audit

The Office of the Inspector General (the “OIG”) of ED commenced an audit regarding Special Allowance Payments (“SAP”) on September 10, 2007. On September 25, 2013, we received the final audit determination of Federal Student Aid (the “Final Audit Determination”) on the final audit report issued by the OIG on August 3, 2009 related to this audit. The Final Audit Determination concurred with the final audit report issued by the OIG and instructed us to make adjustment to our government billing to reflect the policy determination. In August 2016, we filed our notice of appeal relating to this Final Audit Determination to the Administrative Actions and Appeals Service Group of ED. This matter remains open. We continue to believe that our SAP billing practices were proper, considering then-existing ED guidance and lack of applicable regulations. The Company established a reserve for this matter in 2014 as part of the total reserve for pending regulatory matters discussed previously and does not believe, at this time, that an adverse ruling would have a material effect on the Company as a whole.

Contingencies

In the ordinary course of business, we and our subsidiaries are defendants in or parties to pending and threatened legal actions and proceedings including actions brought on behalf of various classes of claimants. These actions and proceedings may be based on alleged violations of consumer protection, securities, employment and other laws. In certain of these actions and proceedings, claims for substantial monetary damage are asserted against us and our subsidiaries.

In the ordinary course of business, we and our subsidiaries are subject to regulatory examinations, information gathering requests, inquiries and investigations. In connection with formal and informal inquiries in these cases, we and our subsidiaries receive numerous requests, subpoenas and orders for documents, testimony and information in connection with various aspects of our regulated activities.

In view of the inherent difficulty of predicting the outcome of such litigation and regulatory matters, we cannot predict what the eventual outcome of the pending matters will be, what the timing or the ultimate resolution of these matters will be, or what the eventual loss, fines or penalties related to each pending matter may be.

We are required to establish reserves for litigation and regulatory matters where those matters present loss contingencies that are both probable and estimable. When loss contingencies are not both probable and estimable, we do not establish reserves.

Based on current knowledge, reserves have been established for certain litigation or regulatory matters where the loss is both probable and estimable. Based on current knowledge, management does not believe that loss contingencies, if any, arising from pending investigations, litigation or regulatory matters will have a material adverse effect on our consolidated financial position, liquidity, results of operations or cash flows, except as otherwise disclosed.

14. Income Taxes

Reconciliations of the statutory U.S. federal income tax rates to our effective tax rate for continuing operations follow:

	Years Ended December 31,		
	2016	2015	2014
Statutory rate	35.0%	35.0%	35.0%
State tax, net of federal benefit	3.8	2.6	2.0
Other, net	(.3)	.1	.5
Effective tax rate	38.5%	37.7%	37.5%

The effective tax rate varies from the statutory U.S. federal rate of 35 percent primarily due to the impact of state taxes, net of federal benefit.

Income tax expense consists of:

	December 31,		
(Dollars in millions)	2016	2015	2014
Current provision/(benefit):			
Federal	$246	$136	$440
State	47	22	41
Foreign	1	—	—
Total current provision/(benefit)	294	158	481
Deferred provision/(benefit):			
Federal	115	398	186
State	18	41	14
Foreign	—	—	—
Total deferred provision/(benefit)	133	439	200
Provision for income tax expense/(benefit)	$427	$597	$681

The tax effect of temporary differences that give rise to deferred tax assets and liabilities include the following:

	December 31,	
(Dollars in millions)	2016	2015
Deferred tax assets:		
Loan reserves	$581	$ 648
Education loan premiums and discounts, net	74	95
Market value adjustments on education loans, investments and derivatives	65	126
Deferred revenue	37	46
Accrued expenses not currently deductible	33	24
Stock-based compensation plans	32	43
Unrealized derivative and investment gains and losses, net	—	30
Other	45	29
Total deferred tax assets	867	1,041
Deferred tax liabilities:		
Original issue discount on borrowings	27	23
Other	38	46
Total deferred tax liabilities	65	69
Net deferred tax assets	$802	$ 972

14. Income Taxes (Continued)

Included in other deferred tax assets is a valuation allowance of $7 million and $7 million as of December 31, 2016 and 2015, respectively, against a portion of the Company's federal and state deferred tax assets. The valuation allowance is primarily attributable to deferred tax assets for state net operating loss carryforwards that management believes it is more likely than not will expire prior to being realized. The ultimate realization of the deferred tax assets is dependent upon the generation of future taxable income of the appropriate character (i.e. capital or ordinary) during the period in which the temporary differences become deductible. Management considers, among other things, the economic slowdown, the scheduled reversals of deferred tax liabilities, and the history of positive taxable income available for net operating loss carrybacks in evaluating the realizability of the deferred tax assets.

As of December 31, 2016, we have apportioned state net operating loss carryforwards of $204 million which begin to expire in 2022.

Accounting for Uncertainty in Income Taxes

The following table summarizes changes in unrecognized tax benefits:

	December 31,		
(Dollars in millions)	2016	2015	2014
Unrecognized tax benefits at beginning of year	$56.3	$51.9	$ 56.0
Increases resulting from tax positions taken during a prior period	19.9	1.6	1.0
Decreases resulting from tax positions taken during a prior period	(5.6)	(1.8)	(12.4)
Increases resulting from tax positions taken during the current period	4.4	6.9	8.4
Decreases related to settlements with taxing authorities	(.1)	—	(.6)
Increases related to settlements with taxing authorities	—	—	—
Reductions related to the lapse of statute of limitations	(1.9)	(2.3)	(.5)
Unrecognized tax benefits at end of year	$73.0	$56.3	$ 51.9

As of December 31, 2016, the gross unrecognized tax benefits are $73.0 million. Included in the $73.0 million are $45.5 million of unrecognized tax benefits that, if recognized, would favorably impact the effective tax rate.

The Company or one of its subsidiaries files income tax returns at the U.S. federal level, in most U.S. states, and various foreign jurisdictions. All periods prior to 2013 are closed for federal examination purposes. Various combinations of subsidiaries, tax years, and jurisdictions remain open for review, subject to statute of limitations periods (typically 3 to 4 prior years). We do not expect the resolution of open audits to have a material impact on our unrecognized tax benefits.

15. Segment Reporting

We monitor and assess our ongoing operations and results by three primary operating segments — the FFELP Loans operating segment, the Private Education Loans operating segment and the Business Services operating segment. These three operating segments meet the quantitative thresholds for reportable segments. Accordingly, the results of operations of our FFELP Loans, Private Education Loans and Business Services segments are presented separately. We have smaller operating segments that consist of business operations that are winding down. These operating segments do not meet the quantitative thresholds to be considered reportable segments. As a result, the results of operations for these operating segments are combined with gains/losses from

15. Segment Reporting (Continued)

the repurchase of debt, the financial results of our corporate liquidity portfolio, unallocated overhead and regulatory-related costs within the Other reportable segment. The management reporting process measures the performance of our operating segments based on our management structure, as well as the methodology we used to evaluate performance and allocate resources. Management, including our chief operating decision makers, evaluates the performance of our operating segments based on their profitability. As discussed further below, we measure the profitability of our operating segments based on "Core Earnings." Accordingly, information regarding our reportable segments is provided based on a "Core Earnings" basis.

FFELP Loans Segment

In the FFELP Loans segment, we acquire and finance FFELP Loans. Although FFELP Loans are no longer originated, we continue to pursue acquisitions of FFELP Loan portfolios. These acquisitions leverage our servicing scale and generate incremental earnings and cash flow. In this segment, we generate revenue primarily through net interest income on the FFELP Loan portfolio (after provision for loan losses). This segment is expected to generate significant amounts of earnings and cash flow as the portfolio amortizes.

We are currently the largest holder of FFELP Loans. Navient's portfolio of FFELP Loans as of December 31, 2016 was $87.7 billion and we anticipate that this FFELP Loan portfolio will have an amortization period in excess of 20 years and a 7-year remaining weighted average life. Navient's goal is to maximize and optimize the timing of the cash flows generated by its FFELP Loan portfolio. Navient also seeks to acquire FFELP Loan portfolios from third parties to add net interest income and servicing revenue. During the year ended December 31, 2016, Navient acquired $3.5 billion of FFELP Loans. FFELP Loans are insured or guaranteed by state or not-for-profit agencies and are protected by contractual rights to recovery from the United States pursuant to guaranty agreements among ED and these agencies. These guaranty agreements generally cover at least 97 percent of a FFELP Loan's principal and accrued interest for loans disbursed. For more discussion of the FFELP and related credit support mechanisms, see Appendix A "Description of Federal Family Education Loan Program."

As a result of the long-term funding strategy used for our FFELP Loan portfolio and the insurance and guarantees provided on these loans, the portfolio generates consistent and predictable cash flows. As of December 31, 2016, approximately 81 percent of the FFELP Loans held by Navient were funded to term with non-recourse, long-term securitization debt.

The Higher Education Act of 1965 ("HEA") continues to regulate every aspect of FFELP Loans, including ongoing communications with borrowers and default aversion requirements. Failure to service FFELP Loans properly could jeopardize the insurance, guarantees and federal support on these loans. The insurance and guarantees on Navient's existing FFELP Loans were not affected by the termination of FFELP originations.

The following table includes asset information for our FFELP Loans segment.

	December 31,	
(Dollars in millions)	**2016**	**2015**
FFELP Loans, net	$87,730	$ 96,402
Cash and investments[1]	3,212	3,572
Other	1,907	2,045
Total assets	$92,849	$102,019

[1] Includes restricted cash and investments.

15. Segment Reporting (Continued)

Private Education Loans Segment

In this segment, we acquire, finance, and service our Private Education Loans. Private Education Loans primarily bridge the gap between the cost of higher education and the amount funded through financial aid, federal loans. or students' and families' resources. They also allow borrowers to refinance existing education loans at a lower rate. We pursue acquisitions of Private Education Loan portfolios. These acquisitions leverage our servicing scale and generate incremental earnings and cash flow. In this segment, we generate revenue primarily through net interest income on the Private Education Loan portfolio (after provision for loan losses). This segment is expected to generate significant amounts of earnings and cash flow as the portfolio amortizes.

We are currently the largest holder of Private Education Loans. Navient's portfolio of Private Education Loans as of December 31, 2016 was $23.3 billion and we anticipate that this Private Education Loan portfolio will have an amortization period in excess of 20 years and a 6-year remaining weighted average life. Navient's goal is to maximize and optimize the timing of the cash flows generated by its Private Education Loan portfolio. As of December 31, 2016, approximately 61 percent of the Private Education Loans held by Navient were funded to term with non-recourse, long-term securitization debt.

Unlike FFELP Loans, the holder of a Private Education Loan bears the full credit risk of the borrower and any cosigner. Navient believes the credit risk of the Private Education Loans it owns is well managed through the rigorous underwriting practices and risk-based pricing applied when the loans were originated, the continued high levels of qualified cosigners, our internal servicing and risk mitigation practices, and our careful use of forbearance and loan modification programs. Navient believes that these elements and practices reduce the risk of payment interruptions and defaults on its Private Education Loan portfolio.

The following table includes asset information for our Private Education Loans segment.

	December 31,	
(Dollars in millions)	2016	2015
Private Education Loans, net	$23,340	$26,394
Cash and investments[1]	667	596
Other	1,567	1,988
Total assets	$25,574	$28,978

[1] Includes restricted cash and investments.

Business Services Segment

Our Business Services segment generates revenue from business processing services related to servicing, asset recovery and other business processing activities. Within this segment, we generate revenue primarily through servicing our FFELP Loan portfolio as well as servicing education loans for Guarantors of FFELP Loans and other institutions, including ED. We provide asset recovery services for loans and receivables on behalf of Guarantors of FFELP Loans and higher education institutions. In addition, we provide asset recovery and other business processing services for federal, state, court, and municipal clients, public authorities, and health care organizations.

We provide business processing services for over 1,000 clients, working with a broad spectrum of services and asset classes. This market is highly fragmented and provides attractive organic growth opportunities. As of December 31, 2016, Navient had an outstanding inventory of asset recovery receivables of approximately

15. Segment Reporting (Continued)

$20.0 billion, of which $10.1 billion was attributable to asset classes unrelated to education loans. Non-education related asset recovery revenues increased 77 percent, from $99 million in 2015 to $174 million in 2016.

Federal Education Loan Related Revenues

In 2016, federal education loan (FFELP and ED) related revenues in the Business Services segment accounted for 80 percent of total Business Services segment revenues compared with 87 percent in 2015. Total Business Services segment revenues were $1.01 billion for the year ended December 31, 2016, compared to $1.02 billion for the year ended December 31, 2015.

Navient is currently the largest servicer and collector of loans made under the FFELP program, and the majority of our income has been derived, directly or indirectly, from our portfolio of FFELP Loans and the servicing and asset recovery we have provided for Guarantors and third-party owners of FFELP Loans. In 2010, Congress passed legislation ending the origination of education loans under FFELP. The terms and conditions of existing FFELP Loans were not affected by this legislation. We anticipate that the revenue we earn from providing servicing and asset recovery services on FFELP Loans will decline over time.

- Servicing revenues from the FFELP Loans we own represent intercompany charges to the FFELP Loans segment at rates paid to us by the securitization trusts which own the loans. These fees are contractually the first payment priority of the trusts after the payment of the trustee fees and exceed the actual cost of servicing the loans. Intercompany loan servicing revenues declined to $389 million in 2016 from $427 million in 2015. Intercompany loan servicing revenues will continue to decline as our FFELP Loan portfolio amortizes.
- In 2016, we earned account maintenance fees on FFELP Loans serviced for Guarantors of $21 million, down from $33 million in 2015. These fees will continue to decline as the underlying FFELP Loan portfolio serviced for Guarantors amortizes.
- As of December 31, 2016, we provide asset recovery (default aversion, post-default collections and claims processing) to 11 of the 26 Guarantor agencies that serve as intermediaries between the U.S. federal government and FFELP lenders and are responsible for paying the claims made on defaulted loans. In 2016, asset recovery revenue from Guarantor clients totaled $194 million, compared to $209 million the prior year. As FFELP Loans are no longer originated, these revenues will decline over time unless we add additional Guarantor clients. The rate at which these revenues will decrease has also been affected by the Bipartisan Budget Act (the "Budget Act") enacted on December 26, 2013 and effective on July 1, 2014, which reduced the amount to be paid to Guarantor agencies for assisting customers to rehabilitate their defaulted FFELP Loans under Section 428F of the HEA. This aspect of the Budget Act reduced our revenue by approximately $79 million in 2015 compared to 2014.

Since 2009 when we were selected through a competitive bidding process, Navient has been one of four TIVAS that provides loan servicing for federal loans owned by ED. This contract has been extended through 2019. Under the terms of the contract extension, the allocation of new borrower volume is determined twice each year based on the relative performance of the servicers on five metrics: borrowers in current repayment status (30 percent), borrowers more than 90 but less than 271 days delinquent (15 percent), borrowers 271 days or more but less than 360 days delinquent (15 percent), a survey of borrowers (35 percent), and a survey of ED personnel (5 percent). Under this servicing contract as of December 31, 2016, we service approximately 6.2 million accounts or $197.0 billion in loans. We earned $151 million of revenue under the contract for the year ended December 31, 2016. We continually strive to help our customers succeed and seek to improve on the performance metrics that determine the allocation of new accounts under the servicing contract with ED.

15. Segment Reporting (Continued)

On April 4, 2016, ED published the first part of a two-part RFP related to a new servicing platform for the Direct Student Loan Program. The first part of the RFP focused on screening candidates' capabilities relative to certain published criteria. In July 2016, Navient was selected as one of three companies eligible to submit responses in the second part of the RFP process. On October 26, 2016, ED published the second part of the RFP. On January 9, 2017, Navient submitted its bid for ED's single servicing solution contract. We have been informed that one of the two other bidders filed a bid protest in relation to this RFP on January 5, 2017.

At December 31, 2016 and 2015, the Business Services segment had total assets of $587 million and $657 million, respectively.

Other Segment

Our Other segment primarily consists of activities of our holding company, including the repurchase of debt, our corporate liquidity portfolio, unallocated overhead and regulatory-related costs. We also include results from certain smaller wind-down operations within this segment.

At December 31, 2016 and 2015, the Other segment had total assets of $2.1 billion and $2.4 billion, respectively.

Measure of Profitability

We prepare financial statements and present financial results in accordance with GAAP. However, we also evaluate our business segments and present financial results on a basis that differs from GAAP. We refer to this different basis of presentation as "Core Earnings." We provide this "Core Earnings" basis of presentation on a consolidated basis for each business segment because this is what we review internally when making management decisions regarding our performance and how we allocate resources. We also refer to this information in our presentations with credit rating agencies, lenders and investors. Because our "Core Earnings" basis of presentation corresponds to our segment financial presentations, we are required by GAAP to provide "Core Earnings" disclosure in the notes to our consolidated financial statements for our business segments.

15. Segment Reporting (Continued)

"Core Earnings" are not a substitute for reported results under GAAP. We use "Core Earnings" to manage each business segment because "Core Earnings" reflect adjustments to GAAP financial results for three items, discussed below, that are either related to the Spin-Off or create significant volatility mostly due to timing factors generally beyond the control of management. Accordingly, we believe that "Core Earnings" provide management with a useful basis from which to better evaluate results from ongoing operations against the business plan or against results from prior periods. Consequently, we disclose this information because we believe it provides investors with additional information regarding the operational and performance indicators that are most closely assessed by management. When compared to GAAP results, the three items we remove to result in our "Core Earnings" presentations are:

1. The financial results attributable to the operations of SLM BankCo prior to the Spin-Off and related restructuring and reorganization expense incurred in connection with the Spin-Off, including the restructuring expenses related to the restructuring initiative launched in second-quarter 2015 to simplify and streamline the Company's management structure post-Spin-Off. For GAAP purposes, Navient reflected the deemed distribution of SLM BankCo on April 30, 2014. For "Core Earnings," we exclude the consumer banking business (SLM BankCo) as if it had never been a part of Navient's historical results prior to the deemed distribution of SLM BankCo on April 30, 2014;
2. Unrealized mark-to-market gains/losses resulting from our use of derivative instruments to hedge our economic risks that do not qualify for hedge accounting treatment or do qualify for hedge accounting treatment but result in ineffectiveness; and
3. The accounting for goodwill and acquired intangible assets.

While GAAP provides a uniform, comprehensive basis of accounting, for the reasons described above, our "Core Earnings" basis of presentation does not. "Core Earnings" are subject to certain general and specific limitations that investors should carefully consider. For example, there is no comprehensive, authoritative guidance for management reporting. Our "Core Earnings" are not defined terms within GAAP and may not be comparable to similarly titled measures reported by other companies. Accordingly, our "Core Earnings" presentation does not represent a comprehensive basis of accounting. Investors, therefore, may not be able to compare our performance with that of other financial services companies based upon "Core Earnings." "Core Earnings" results are only meant to supplement GAAP results by providing additional information regarding the operational and performance indicators that are most closely used by management, our board of directors, credit rating agencies, lenders and investors to assess performance.

15. Segment Reporting (Continued)

Segment Results and Reconciliations to GAAP

	Year Ended December 31, 2016									
							Adjustments			
(Dollars in millions)	FFELP Loans	Private Education Loans	Business Services	Other	Eliminations[1]	Total "Core Earnings"	Reclassifications	Additions/ (Subtractions)	Total Adjustments[2]	Total GAAP
Interest income:										
Education loans	$2,395	$1,587	$ —	$ —	$ —	$3,982	$ 247	$(114)	$133	$4,115
Other loans	—	—	—	9	—	9	—	—	—	9
Cash and investments	16	2	—	4	—	22	—	—	—	22
Total interest income	2,411	1,589	—	13	—	4,013	247	(114)	133	4,146
Total interest expense	1,592	705	—	113	—	2,410	31	—	31	2,441
Net interest income (loss)	819	884	—	(100)	—	1,603	216	(114)	102	1,705
Less: provisions for loan losses	43	383	—	3	—	429	—	—	—	429
Net interest income (loss) after provisions for loan losses	776	501	—	(103)	—	1,174	216	(114)	102	1,276
Other income (loss):										
Servicing revenue	55	14	624	—	(389)	304	—	—	—	304
Asset recovery and business processing revenue	—	—	390	—	—	390	—	—	—	390
Other income	—	—	—	14	—	14	(216)	326	110	124
Gains on debt repurchases	—	—	—	1	—	1	—	—	—	1
Total other income (loss)	55	14	1,014	15	(389)	709	(216)	326	110	819
Expenses:										
Direct operating expenses	401	167	524	28	(389)	731	—	—	—	731
Overhead expenses	—	—	—	220	—	220	—	—	—	220
Operating expenses	401	167	524	248	(389)	951	—	—	—	951
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	—	36	36	36
Restructuring and other reorganization expenses	—	—	—	—	—	—	—	—	—	—
Total expenses	401	167	524	248	(389)	951	—	36	36	987
Income (loss) from continuing operations, before income tax expense (benefit)	430	348	490	(336)	—	932	—	176	176	1,108
Income tax expense (benefit)[3]	158	129	182	(124)	—	345	—	82	82	427
Net income (loss) from continuing operations	272	219	308	(212)	—	587	—	94	94	681
Income (loss) from discontinued operations, net of tax expense (benefit)	—	—	—	—	—	—	—	—	—	—
Net income (loss)	$ 272	$ 219	$ 308	$(212)	$ —	$ 587	$ —	$ 94	$ 94	$ 681

(1) The eliminations in servicing revenue and direct operating expense represent the elimination of intercompany servicing revenue where the Business Services segment performs the loan servicing function for the FFELP Loans segment.

(2) "Core Earnings" adjustments to GAAP:

	Year Ended December 31, 2016			
(Dollars in millions)	Net Impact from Spin-Off of SLM BankCo	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
Net interest income after provisions for loan losses	$—	$102	$ —	$102
Total other income (loss)	—	110	—	110
Operating expenses	—	—	—	—
Goodwill and acquired intangible asset impairment and amortization	—	—	36	36
Restructuring and other reorganization expenses	—	—	—	—
Total "Core Earnings" adjustments to GAAP	$—	$212	$(36)	176
Income tax expense (benefit)				82
Net income (loss)				$ 94

(3) Income taxes are based on a percentage of net income before tax for the individual reportable segment.

15. Segment Reporting (Continued)

(Dollars in millions)	FFELP Loans	Private Education Loans	Business Services	Other	Eliminations(1)	Total "Core Earnings"	Adjustments: Reclassifications	Adjustments: Additions/ (Subtractions)	Adjustments: Total Adjustments(2)	Total GAAP
	Year Ended December 31, 2015									
Interest income:										
Education loans	$2,112	$1,756	$ —	$ —	$ —	$3,868	$ 650	$(238)	$412	$4,280
Other loans	—	—	—	7	—	7	—	—	—	7
Cash and investments	6	—	—	2	—	8	—	—	—	8
Total interest income	2,118	1,756	—	9	—	3,883	650	(238)	412	4,295
Total interest expense	1,245	680	—	112	—	2,037	37	—	37	2,074
Net interest income (loss)	873	1,076	—	(103)	—	1,846	613	(238)	375	2,221
Less: provisions for loan losses	46	538	—	(3)	—	581	—	—	—	581
Net interest income (loss) after provisions for loan losses	827	538	—	(100)	—	1,265	613	(238)	375	1,640
Other income (loss):										
Servicing revenue	95	21	651	—	(427)	340	—	—	—	340
Asset recovery and business processing revenue	—	—	367	—	—	367	—	—	—	367
Other income	—	—	4	11	—	15	(613)	781	168	183
Gains (losses) on sales of loans and investments	12	(21)	—	—	—	(9)	—	—	—	(9)
Gains on debt repurchases	—	—	—	21	—	21	—	—	—	21
Total other income (loss)	107	—	1,022	32	(427)	734	(613)	781	168	902
Expenses:										
Direct operating expenses	443	168	485	30	(427)	699	—	—	—	699
Overhead expenses	—	—	—	219	—	219	—	—	—	219
Operating expenses	443	168	485	249	(427)	918	—	—	—	918
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	—	12	12	12
Restructuring and other reorganization expenses	—	—	—	—	—	—	—	32	32	32
Total expenses	443	168	485	249	(427)	918	—	44	44	962
Income (loss) from continuing operations, before income tax expense (benefit)	491	370	537	(317)	—	1,081	—	499	499	1,580
Income tax expense (benefit)(3)	183	137	199	(118)	—	401	—	196	196	597
Net income (loss) from continuing operations	308	233	338	(199)	—	680	—	303	303	983
Income (loss) from discontinued operations, net of tax expense (benefit)	—	—	—	1	—	1	—	—	—	1
Net income (loss)	$ 308	$ 233	$ 338	$(198)	$ —	$ 681	$ —	$ 303	$303	$ 984

(1) The eliminations in servicing revenue and direct operating expense represent the elimination of intercompany servicing revenue where the Business Services segment performs the loan servicing function for the FFELP Loans segment.

(2) "Core Earnings" adjustments to GAAP:

(Dollars in millions)	Net Impact from Spin-Off of SLM BankCo	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
	Year Ended December 31, 2015			
Net interest income after provisions for loan losses	$ —	$375	$ —	$375
Total other income (loss)	—	168	—	168
Operating expenses	—	—	—	—
Goodwill and acquired intangible asset impairment and amortization	—	—	12	12
Restructuring and other reorganization expenses	32	—	—	32
Total "Core Earnings" adjustments to GAAP	$(32)	$543	$(12)	499
Income tax expense (benefit)				196
Net income (loss)				$303

(3) Income taxes are based on a percentage of net income before tax for the individual reportable segment.

15. Segment Reporting (Continued)

	Year Ended December 31, 2014									
							Adjustments			
(Dollars in millions)	FFELP Loans	Private Education Loans	Business Services	Other	Eliminations[1]	Total "Core Earnings"	Reclassifications	Additions/ (Subtractions)	Total Adjustments[2]	Total GAAP
Interest income:										
Education loans	$2,097	$1,958	$ —	$ —	$ —	$4,055	$ 699	$ (42)	$657	$4,712
Other loans	—	—	—	9	—	9	—	—	—	9
Cash and investments	4	—	—	4	—	8	—	1	1	9
Total interest income	2,101	1,958	—	13	—	4,072	699	(41)	658	4,730
Total interest expense	1,168	708	—	114	—	1,990	42	31	73	2,063
Net interest income (loss)	933	1,250	—	(101)	—	2,082	657	(72)	585	2,667
Less: provisions for loan losses	59	539	—	—	—	598	—	49	49	647
Net interest income (loss) after provisions for loan losses	874	711	—	(101)	—	1,484	657	(121)	536	2,020
Other income (loss):										
Servicing revenue	62	25	668	—	(456)	299	—	(1)	(1)	298
Asset recovery and business processing revenue	—	—	388	—	—	388	—	—	—	388
Other income	—	—	6	26	—	32	(657)	846	189	221
Gains on debt repurchases	—	—	—	—	—	—	—	—	—	—
Total other income (loss)	62	25	1,062	26	(456)	719	(657)	845	188	907
Expenses:										
Direct operating expenses	478	181	389	132	(456)	724	—	36	36	760
Overhead expenses	—	—	—	200	—	200	—	27	27	227
Operating expenses	478	181	389	332	(456)	924	—	63	63	987
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	—	9	9	9
Restructuring and other reorganization expenses	—	—	—	—	—	—	—	113	113	113
Total expenses	478	181	389	332	(456)	924	—	185	185	1,109
Income (loss) from continuing operations, before income tax expense (benefit)	458	555	673	(407)	—	1,279	—	539	539	1,818
Income tax expense (benefit)[3]	171	204	248	(150)	—	473	—	208	208	681
Net income (loss) from continuing operations	$ 287	$ 351	$ 425	$(257)	$ —	$ 806	$ —	$ 331	$331	$1,137
Income (loss) from discontinued operations, net of tax expense (benefit)	—	—	—	—	—	—	—	—	—	—
Net income (loss)	$ 287	$ 351	$ 425	$(257)	$ —	$ 806	$ —	$ 331	$331	$1,137

(1) The eliminations in servicing revenue and direct operating expense represent the elimination of intercompany servicing revenue where the Business Services segment performs the loan servicing function for the FFELP Loans segment.

(2) "Core Earnings" adjustments to GAAP:

	Year Ended December 31, 2014			
(Dollars in millions)	Net Impact from Spin-Off of SLM BankCo	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
Net interest income after provisions for loan losses	$136	$400	$—	$536
Total other income (loss)	15	173	—	188
Operating expenses	63	—	—	63
Goodwill and acquired intangible asset impairment and amortization	—	—	9	9
Restructuring and other reorganization expenses	113	—	—	113
Total "Core Earnings" adjustments to GAAP	$ (25)	$573	$ (9)	539
Income tax expense (benefit)				208
Net income (loss)				$331

(3) Income taxes are based on a percentage of net income before tax for the individual reportable segment.

15. Segment Reporting (Continued)

Summary of "Core Earnings" Adjustments to GAAP

(Dollars in millions)	Years Ended December 31, 2016	2015	2014
"Core Earnings" adjustments to GAAP:			
Net impact of the removal of SLM BankCo's operations and restructuring and reorganization expense in connection with the Spin-Off[1]	$ —	$ (32)	$ (25)
Net impact of derivative accounting[2]	212	543	573
Net impact of goodwill and acquired intangible assets[3]	(36)	(12)	(9)
Net tax effect[4]	(82)	(196)	(208)
Total "Core Earnings" adjustments to GAAP	$ 94	$ 303	$ 331

(1) **SLM BankCo's operations and restructuring and other reorganization expense in connection with the Spin-Off:** For "Core Earnings," we have assumed the consumer banking business (SLM BankCo) was never a part of Navient's historical results prior to the deemed distribution of SLM BankCo on April 30, 2014 and we have removed the restructuring and other reorganization expense incurred in connection with the Spin-Off, including the restructuring expenses related to the restructuring initiative launched in second-quarter 2015 to simplify and streamline the Company's management structure post-Spin-Off. Excluding these items provides management with a useful basis from which to better evaluate results from ongoing operations against results from prior periods. The adjustment relates to the exclusion of the consumer banking business and represents the operations, assets, liabilities and equity of SLM BankCo, which is comprised of Sallie Mae Bank, Upromise Rewards, the Insurance Business, and the Private Education Loan origination functions. Included in these amounts are also certain general corporate overhead expenses related to the consumer banking business. General corporate overhead consists of costs primarily associated with accounting, finance, legal, human resources, certain information technology costs, stock compensation, and executive management and the board of directors. These costs were generally allocated to the consumer banking business based on the proportionate level of effort provided to the consumer banking business relative to SLM Corporation using a relevant allocation driver (e.g., in proportion to the number of employees by function that were being transferred to SLM BankCo as opposed to remaining at Navient). All intercompany transactions between SLM BankCo and Navient have been eliminated. In addition, all preferred stock dividends have been removed as SLM BankCo succeeded SLM Corporation as the issuer of the preferred stock in connection with the Spin-Off. The restructuring and other reorganization expense incurred in connection with the Spin-Off includes the restructuring expenses related to the restructuring initiative launched in second-quarter 2015 to simplify and streamline the Company's management structure post-Spin-Off.

(2) **Derivative accounting:** "Core Earnings" exclude periodic unrealized gains and losses that are caused by the mark-to-market valuations on derivatives that do not qualify for hedge accounting treatment under GAAP as well as the periodic unrealized gains and losses that are a result of ineffectiveness recognized related to effective hedges under GAAP. These unrealized gains and losses occur in our FFELP Loans, Private Education Loans and Other business segments. Under GAAP, for our derivatives that are held to maturity, the cumulative net unrealized gain or loss over the life of the contract will equal $0 except for Floor Income Contracts where the cumulative unrealized gain will equal the amount for which we sold the contract. In our "Core Earnings" presentation, we recognize the economic effect of these hedges, which generally results in any net settlement cash paid or received being recognized ratably as an interest expense or revenue over the hedged item's life.

(3) **Goodwill and acquired intangible assets:** Our "Core Earnings" exclude goodwill and intangible asset impairment and amortization of acquired intangible assets.

(4) **Net Tax Effect:** Such tax effect is based upon our "Core Earnings" effective tax rate for the year.

16. Quarterly Financial Information (unaudited)

(Dollars in millions, except per share data)	2016 First Quarter	2016 Second Quarter	2016 Third Quarter	2016 Fourth Quarter
Net interest income	$486	$429	$412	$378
Less: provisions for loan losses	111	110	106	102
Net interest income after provisions for loan losses	375	319	306	276
Other income	159	151	174	218
Gains (losses) on derivative and hedging activities, net	1	(28)	137	6
Operating expenses	247	230	228	246
Goodwill and acquired intangible asset impairment and amortization expense	4	6	12	13
Restructuring and other reorganization expenses	—	—	—	—
Income tax expense	103	81	147	96
Net income from continuing operations	181	125	230	145
Income from discontinued operations, net of tax expense	—	—	—	—
Net income	181	125	230	145
Less: net income (loss) attributable to noncontrolling interest	—	—	—	—
Net income attributable to Navient Corporation	$181	$125	$230	$145
Basic earnings per common share attributable to Navient Corporation	$ .53	$ .39	$ .74	$ .49
Diluted earnings per common share attributable to Navient Corporation	$ .53	$ .38	$ .73	$ .48

16. Quarterly Financial Information (unaudited) (Continued)

	2015			
(Dollars in millions, except per share data)	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**
Net interest income	$583	$549	$553	$536
Less: provisions for loan losses	130	203	128	120
Net interest income after provisions for loan losses	453	346	425	416
Other income	178	219	161	178
Gains (losses) on derivative and hedging activities, net	71	(18)	20	93
Operating expenses	230	225	228	235
Goodwill and acquired intangible asset impairment and amortization expense	1	3	3	5
Restructuring and other reorganization expenses	3	29	—	—
Income tax expense	179	111	142	164
Net income from continuing operations	289	179	233	283
Income from discontinued operations, net of tax expense	—	—	1	—
Net income	289	179	234	283
Less: net income (loss) attributable to noncontrolling interest	—	—	—	—
Net income attributable to Navient Corporation	$289	$179	$234	$283
Basic earnings per common share attributable to Navient Corporation	$ .73	$ .47	$ .63	$ .80
Diluted earnings per common share attributable to Navient Corporation	$ .71	$ .46	$ .63	$ .78

CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors
Navient Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited Navient Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

The Company acquired Earnest in November 2017, and management excluded Earnest from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2017. Earnest represented less than one percent of consolidated total revenues and less than one percent of consolidated total assets of the Company as of and for the year ended December 31, 2017. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Earnest.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements), and our report dated February 26, 2018 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

(signed) KPMG LLP

McLean, Virginia
February 26, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors
Navient Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Navient Corporation and subsidiaries (the Company) as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 26, 2018 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

(signed) KPMG LLP

We have served as the Company's auditor since 2012.

McLean, Virginia
February 26, 2018

NAVIENT CORPORATION

CONSOLIDATED BALANCE SHEETS
(In millions, except per share amounts)

	December 31, 2017	December 31, 2016
Assets		
FFELP Loans (net of allowance for losses of $60 and $67, respectively)	$ 81,703	$ 87,730
Private Education Loans (net of allowance for losses of $1,297 and $1,351, respectively)	23,419	23,340
Investments		
Available-for-sale	2	3
Other	268	347
Total investments	270	350
Cash and cash equivalents	1,518	1,253
Restricted cash and investments	3,246	3,600
Goodwill and acquired intangible assets, net	810	670
Other assets	4,025	4,193
Total assets	$114,991	$121,136
Liabilities		
Short-term borrowings	$ 4,771	$ 2,334
Long-term borrowings	105,012	112,368
Other liabilities	1,723	2,711
Total liabilities	111,506	117,413
Commitments and contingencies		
Equity		
Common stock, par value $0.01 per share; 1.125 billion shares authorized: 440 million and 436 million shares issued, respectively	4	4
Additional paid-in capital	3,077	3,022
Accumulated other comprehensive income (net of tax expense of $36 and $3, respectively)	61	6
Retained earnings	3,004	2,890
Total Navient Corporation stockholders' equity before treasury stock	6,146	5,922
Less: Common stock held in treasury at cost: 177 million and 145 million shares, respectively	(2,692)	(2,223)
Total Navient Corporation stockholders' equity	3,454	3,699
Noncontrolling interest	31	24
Total equity	3,485	3,723
Total liabilities and equity	$114,991	$121,136

Supplemental information — assets and liabilities of consolidated variable interest entities:

	December 31, 2017	December 31, 2016
FFELP Loans	$77,710	$83,429
Private Education Loans	20,886	20,500
Other loans	—	79
Restricted cash	3,091	3,434
Other assets, net	1,160	(11)
Short-term borrowings	2,906	1,078
Long-term borrowings	89,317	95,492
Net assets of consolidated variable interest entities	$10,624	$10,861

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Years Ended December 31,		
	2017	2016	2015
Interest income:			
FFELP Loans	$2,693	$2,528	$2,524
Private Education Loans	1,634	1,587	1,756
Other loans	13	9	7
Cash and investments	43	22	8
Total interest income	4,383	4,146	4,295
Total interest expense	2,971	2,441	2,074
Net interest income	1,412	1,705	2,221
Less: provisions for loan losses	426	429	581
Net interest income after provisions for loan losses	986	1,276	1,640
Other income (loss):			
Servicing revenue	290	304	340
Asset recovery and business processing revenue	475	390	367
Other income	9	7	17
Gains (losses) on sales of loans and investments	3	—	(9)
Gains (losses) on debt repurchases	(3)	1	21
Gains (losses) on derivative and hedging activities, net	22	117	166
Total other income	796	819	902
Expenses:			
Salaries and benefits	519	500	467
Other operating expenses	447	451	451
Total operating expenses	966	951	918
Goodwill and acquired intangible asset impairment and amortization expense	23	36	12
Restructuring/other reorganization expenses	29	—	32
Total expenses	1,018	987	962
Income from continuing operations, before income tax expense	764	1,108	1,580
Income tax expense	472	427	597
Net income from continuing operations	292	681	983
Income from discontinued operations, net of tax expense	—	—	1
Net income attributable to Navient Corporation	$ 292	$ 681	$ 984
Basic earnings per common share attributable to Navient Corporation	$ 1.06	$ 2.15	$ 2.62
Average common shares outstanding	275	316	376
Diluted earnings per common share attributable to Navient Corporation	$ 1.04	$ 2.12	$ 2.58
Average common and common equivalent shares outstanding	281	322	382
Dividends per common share attributable to Navient Corporation	$ .64	$ .64	$ .64

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years Ended December 31,		
	2017	2016	2015
Net income	$292	$681	$984
Other comprehensive income (loss):			
Unrealized gains (losses) on derivatives:			
Unrealized hedging gains (losses) on derivatives	89	91	(93)
Reclassification adjustments for derivative (gains) losses included in net income (interest expense)	(1)	(1)	(1)
Total unrealized gains (losses) on derivatives	88	90	(94)
Income tax (expense) benefit	(33)	(33)	34
Other comprehensive income (loss), net of tax expense (benefit)	55	57	(60)
Total comprehensive income attributable to Navient Corporation	$347	$738	$924

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares										
	Issued	Treasury	Outstanding	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2014	425,637,635	(23,902,829)	401,734,806	$ 4	$2,893	$ 9	$1,670	$ (432)	$4,144	$—	$4,144
Comprehensive income:											
Net income	—	—	—	—	—	—	984	—	984	—	984
Other comprehensive loss, net of tax	—	—	—	—	—	(60)	—	—	(60)	—	(60)
Total comprehensive income	—	—	—	—	—	—	—	—	924	—	924
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(240)	—	(240)	—	(240)
Issuance of common shares	4,924,021	—	4,924,021	—	34	—	—	—	34	—	34
Tax impact of employee stock-based compensation plans	—	—	—	—	11	—	—	—	11	—	11
Stock-based compensation expense	—	—	—	—	29	—	—	—	29	—	29
Common stock repurchased	—	(56,043,711)	(56,043,711)	—	—	—	—	(945)	(945)	—	(945)
Shares repurchased related to employee stock-based compensation plans	—	(2,404,328)	(2,404,328)	—	—	—	—	(48)	(48)	—	(48)
Noncontrolling interests in businesses	—	—	—	—	—	—	—	—	—	24	24
Balance at December 31, 2015	430,561,656	(82,350,868)	348,210,788	$ 4	$2,967	$(51)	$2,414	$(1,425)	$3,909	$24	$3,933

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares			Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Issued	Treasury	Outstanding								
Balance at December 31, 2015	430,561,656	(82,350,868)	348,210,788	$ 4	$2,967	$(51)	$2,414	$(1,425)	$3,909	$24	$3,933
Comprehensive income:											
Net income	—	—	—	—	—	—	681	—	681	—	681
Other comprehensive income, net of tax	—	—	—	—	—	57	—	—	57	—	57
Total comprehensive income	—	—	—	—	—	—	—	—	738	—	738
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(201)	—	(201)	—	(201)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	(4)	—	(4)	—	(4)
Issuance of common shares	5,476,010	—	5,476,010	—	35	—	—	—	35	—	35
Tax impact of employee stock-based compensation plans	—	—	—	—	(6)	—	—	—	(6)	—	(6)
Stock-based compensation expense	—	—	—	—	26	—	—	—	26	—	26
Common stock repurchased	—	(59,625,325)	(59,625,325)	—	—	—	—	(755)	(755)	—	(755)
Shares repurchased related to employee stock-based compensation plans	—	(3,197,355)	(3,197,355)	—	—	—	—	(43)	(43)	—	(43)
Balance at December 31, 2016	436,037,666	(145,173,548)	290,864,118	$ 4	$3,022	$ 6	$2,890	$(2,223)	$3,699	$24	$3,723

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares			Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Issued	Treasury	Outstanding								
Balance at December 31, 2016	436,037,666	(145,173,548)	290,864,118	$ 4	$3,022	$ 6	$2,890	$(2,223)	$3,699	$24	$3,723
Comprehensive income:											
Net income	—	—	—	—	—	—	292	—	292	—	292
Other comprehensive income, net of tax	—	—	—	—	—	55	—	—	55	—	55
Total comprehensive income	—	—	—	—	—	—	—	—	347	—	347
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(176)	—	(176)	—	(176)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	(2)	—	(2)	—	(2)
Issuance of common shares	3,680,479	—	3,680,479	—	20	—	—	—	20	—	20
Stock-based compensation expense	—	—	—	—	35	—	—	—	35	—	35
Common stock repurchased	—	(29,646,374)	(29,646,374)	—	—	—	—	(440)	(440)	—	(440)
Shares repurchased related to employee stock-based compensation plans	—	(1,847,651)	(1,847,651)	—	—	—	—	(29)	(29)	—	(29)
Noncontrolling interest in Earnest upon acquisition	—	—	—	—	—	—	—	—	—	7	7
Balance at December 31, 2017	439,718,145	(176,667,573)	263,050,572	$ 4	$3,077	$61	$3,004	$(2,692)	$3,454	$31	$3,485

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years Ended December 31,		
	2017	2016	2015
Operating activities			
Net income	$ 292	$ 681	$ 984
Adjustments to reconcile net income to net cash provided by operating activities:			
Losses (gains) on debt repurchases	3	(1)	(21)
Goodwill and acquired intangible asset impairment and amortization expense	23	36	12
Stock-based compensation expense	35	26	29
Unrealized gains on derivative and hedging activities	(83)	(328)	(781)
Provisions for losses	426	429	581
(Increase) decrease in restricted cash — other	(1)	10	66
(Increase) decrease in accrued interest receivable	(29)	(26)	175
Increase (decrease) in accrued interest payable	11	(92)	(42)
Decrease in other assets	485	628	1,046
Decrease in other liabilities	(5)	(6)	(139)
Total net cash provided by operating activities	1,157	1,357	1,910
Investing activities			
Education loans acquired	(7,456)	(3,683)	(3,736)
Reduction of education loans:			
Installment payments	14,738	14,923	13,933
Proceeds from sales of education loans	—	—	569
Other investing activities, net	(87)	35	131
Proceeds from maturities of available-for-sale securities	—	2	1
Purchases of other securities	(1)	(44)	(187)
Proceeds from maturities of other securities	23	49	97
Decrease in restricted cash — variable interest entities	495	129	220
Purchase of subsidiaries, net of cash acquired	(216)	—	(342)
Total net cash provided by investing activities	7,496	11,411	10,686
Financing activities			
Borrowings collateralized by loans in trust — issued	8,440	6,691	5,011
Borrowings collateralized by loans in trust — repaid	(13,919)	(13,226)	(14,706)
Asset-backed commercial paper conduits, net	(2,363)	(4,002)	974
Long-term notes issued	1,613	1,231	493
Long-term notes repaid	(1,464)	(2,603)	(2,787)
Other financing activities, net	(79)	(244)	(245)
Common stock repurchased	(440)	(755)	(945)
Common dividends paid	(176)	(201)	(240)
Total net cash used in financing activities	(8,388)	(13,109)	(12,445)
Net increase (decrease) in cash and cash equivalents	265	(341)	151
Cash and cash equivalents at beginning of period	1,253	1,594	1,443
Cash and cash equivalents at end of period	$ 1,518	$ 1,253	$ 1,594
Cash disbursements made (refunds received) for:			
Interest	$ 2,872	$ 2,301	$ 1,981
Income taxes paid	$ 157	$ 249	$ 88
Income taxes received	$ (1)	$ (4)	$ (14)
Noncash activity:			
Investing activity — Education loans and restricted cash acquired	$ 1,746	$ —	$ —
Operating activity — Other assets acquired and other liabilities assumed, net	$ 137	$ —	$ —
Financing activity — Borrowings assumed in acquisition of education loans and restricted cash	$ 1,883	$ —	$ —

See accompanying notes to consolidated financial statements.

1. Organization and Business

Navient's Business

Navient is a leading provider of asset management and business processing solutions for education, health care, and government clients at the federal, state, and local levels. We help our clients and millions of Americans achieve financial success through services and support. Headquartered in Wilmington, Delaware, Navient employs team members in western New York, northeastern Pennsylvania, Indiana, Delaware, Tennessee, Texas, Virginia, Wisconsin, California and other locations.

Navient is the largest private sector holder of education loans insured or federally guaranteed under the Federal Family Education Loan Program ("FFELP"). We also hold the largest portfolio of Private Education Loans. We also have begun originating Private Education Refinance Loans. Navient services its own portfolio of education loans, as well as education loans owned by the United States Department of Education ("ED"), financial institutions and nonprofit education lenders. Navient is one of the largest servicers to ED under its Direct Student Loan Program ("DSLP"). Our data-driven insight, service and innovation support customers on the path to successful education loan repayment.

The Company leverages its scale and expertise to provide business processing solutions to a variety of clients, including federal agencies, state and local governments, regional authorities, courts, hospitals, health care systems and other health care providers, and financial service providers. Navient also provides business processing solutions to education-related clients, such as guaranty agencies and colleges and universities.

For all our clients, we aim to improve their financial performance, optimize their operations, and maintain compassionate, compliant service for their customers and constituents.

2. Significant Accounting Policies

Use of Estimates

Our financial reporting and accounting policies conform to generally accepted accounting principles in the United States of America ("GAAP"). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Current market conditions increase the risk and complexity of the judgments in these estimates and actual results could differ from estimates. Key accounting policies that include the most significant judgments, estimates and assumptions include the allowance for loan losses, the effective interest rate method (amortization of education loan and debt premiums and discounts), goodwill and intangible asset impairment assessment, fair value measurement, the consolidation of variable interest entities, and derivative accounting.

Consolidation

The consolidated financial statements include the accounts of Navient Corporation and its majority-owned and controlled subsidiaries and those Variable Interest Entities ("VIEs") for which we are the primary beneficiary, after eliminating the effects of intercompany accounts and transactions.

We consolidate any VIEs where we have determined we are the primary beneficiary. A VIE is a legal entity that does not have sufficient equity at risk to finance its own operations, or whose equity holders do not have the power to direct the activities that most significantly affect the economic performance of the entity, or whose equity holders do not share proportionately in the losses or benefits of the entity. The primary beneficiary of the

2. Significant Accounting Policies (Continued)

VIE is the entity which has both: (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (2) the obligation to absorb losses or receive benefits of the entity that could potentially be significant to the VIE. As it relates to our securitizations and other secured borrowing facilities that are VIEs as of December 31, 2017, we are the servicer of the related education loan assets and own the Residual Interest of the securitization trusts and secured borrowing facilities. As a result, we are the primary beneficiary and consolidate those VIEs.

Fair Value Measurement

We use estimates of fair value in applying various accounting standards for our financial statements. Fair value measurements are used in one of four ways:

- In the consolidated balance sheet with changes in fair value recorded in the consolidated statement of income;
- In the consolidated balance sheet with changes in fair value recorded in the accumulated other comprehensive income section of the consolidated statement of changes in stockholders' equity;
- In the consolidated balance sheet for instruments carried at lower of cost or fair value with impairment charges recorded in the consolidated statement of income; and
- In the notes to the financial statements.

Fair value is defined as the price to sell an asset or transfer a liability in an orderly transaction between willing and able market participants. In general, our policy in estimating fair value is to first look at observable market prices for identical assets and liabilities in active markets, where available. When these are not available, other inputs are used to model fair value such as prices of similar instruments, yield curves, volatilities, prepayment speeds, default rates and credit spreads, relying first on observable data from active markets. Depending on current market conditions, additional adjustments to fair value may be based on factors such as liquidity, credit, and bid/offer spreads. Transaction costs are not included in the determination of fair value. When possible, we seek to validate the model's output to market transactions. Depending on the availability of observable inputs and prices, different valuation models could produce materially different fair value estimates. The values presented may not represent future fair values and may not be realizable.

We categorize our fair value estimates based on a hierarchical framework associated with three levels of price transparency utilized in measuring financial instruments at fair value. Classification is based on the lowest level of input that is significant to the fair value of the instrument. The three levels are as follows:

- Level 1 — Quoted prices (unadjusted) in active markets for identical assets or liabilities that we have the ability to access at the measurement date. The types of financial instruments included in level 1 are highly liquid instruments with quoted prices.
- Level 2 — Inputs from active markets, other than quoted prices for identical instruments, are used to determine fair value. Significant inputs are directly observable from active markets for substantially the full term of the asset or liability being valued.
- Level 3 — Pricing inputs significant to the valuation are unobservable. Inputs are developed based on the best information available. However, significant judgment is required by us in developing the inputs.

Loans

Loans, consisting primarily of federally insured education loans and Private Education Loans, that we have the ability and intent to hold for the foreseeable future are classified as held-for-investment and are carried at

2. Significant Accounting Policies (Continued)

amortized cost. Amortized cost includes the unamortized premiums, discounts, and capitalized origination costs and fees, all of which are amortized to interest income as further discussed below. Loans which are held-for-investment also have an allowance for loan loss as needed. Any loans we have not classified as held-for-investment are classified as held-for-sale, and carried at the lower of cost or fair value. Loans are classified as held-for-sale when we have the intent and ability to sell such loans. Loans which are held-for-sale do not have the associated premium, discount, and capitalized origination costs and fees amortized into interest income. In addition, once a loan is classified as held-for-sale, there is no further adjustment to the loan's allowance for loan losses that existed immediately prior to the reclassification to held-for-sale.

Allowance for Loan Losses

Purchased Credit Impaired ("PCI") Loans

Loans acquired with evidence of deterioration of credit quality since origination for which it is probable, at acquisition, that the investor will be unable to collect all contractually required payments receivable are PCI loans accounted for under Accounting Standard Codification ("ASC") 310-30, "Loans and Debt Securities Acquired with Deteriorated Credit Quality." When considering whether evidence of credit quality deterioration exists as of the purchase date, the Company considers loan guarantees and the following credit attributes: delinquency status, use of forbearance, recent borrower FICO scores, use of loan modification programs, and borrowers who have filed for bankruptcy.

The Company aggregates loans with common risk characteristics into pools and accounts for each pool as a single asset with a single composite interest rate and an aggregate expectation of cash flows. The pools are initially recorded at fair value. The Company recognizes interest income based on each pool's effective interest rate which is based on our estimate of all cash flows expected to be received and includes an assumption about prepayment rates. The pools are tested quarterly for impairment by re-estimating the future cash flows to be received from the pools. If the new estimated cash flows result in a pool's effective interest rate increasing, then this new yield is used prospectively over the remaining life of the pool. If the new estimated cash flows result in a pool's effective interest rate decreasing, the pool is impaired and written down through a valuation allowance to maintain the effective interest rate. Loans classified as PCI do not have charge-offs reported nor are they reported as Trouble Debt Restructuring ("TDR") loans.

Based on the credit attributes discussed above, we determined that $261 million principal amount of Private Education Loans acquired in 2017 are accounted for as PCI loans with a fair value and resulting carry value of $101 million as of the acquisition date. As of acquisition, this portfolio's contractually required payments receivable (the total undiscounted amount of all uncollected contractual principal and interest payments both past due and scheduled for the future, adjusted for prepayments) was $411 million with an estimated accretable yield (income expected to be recognized in future periods) of $108 million. As of December 31, 2017, the carrying amount was $97 million with no valuation allowance recorded.

Purchased Non-Credit Impaired Loans

Loans acquired that do not have evidence of credit deterioration since origination are recorded at fair value with no allowance for loan losses established at the acquisition date. Loan premiums and discounts are amortized as a part of interest income using the interest method under ASC 310-20, "Nonrefundable Fees and Other Costs." An allowance for loan losses would be established if incurred losses in the loans exceed the remaining unamortized discount recorded at the time of acquisition (i.e., the next two years of expected charge-offs as well as any additional TDR allowance required is greater than the remaining discount). As a result of this policy, to

2. Significant Accounting Policies (Continued)

the extent that actual charge-offs exceed any related allowance for loan losses recognized post-acquisition, provision for loan losses is recorded when the loans are charged off. Charge-offs are recorded through the allowance for loan losses. In 2017, we acquired Private Education Loans with unpaid principal balance of $2.8 billion at a discount of $424 million and FFELP Loans with an unpaid principal balance of $3.5 billion at a discount of $47 million, that are accounted for under this policy. No allowance for loan losses has been established for these loans as of December 31, 2017, as the remaining purchased discount associated with the Private Education Loans of $392 million and FFELP Loans of $43 million as of December 31, 2017 remains greater than the incurred losses.

Allowance for Private Education Loan Losses

We consider a loan to be impaired when, based on current information, a loss has been incurred and it is probable that we will not receive all contractual amounts due. When making our assessment as to whether a loan is impaired, we also take into account more than insignificant delays in payment. We generally evaluate impaired loans on an aggregate basis by grouping similar loans. Impaired loans also include those loans which are individually assessed for impairment at a loan level, such as in a troubled debt restructuring ("TDR"). We maintain an allowance for loan losses at an amount sufficient to absorb losses incurred in our portfolios at the reporting date based on a projection of estimated probable credit losses incurred in the portfolio.

Our Private Education Loan portfolio contains TDR and non-TDR loans. For customers experiencing financial difficulty, certain Private Education Loans for which we have granted a forbearance of greater than three months, an interest rate reduction or an extended repayment plan are classified as TDRs. The allowance requirements are different based on these designations. In determining the allowance for loan losses on our non-TDR portfolio, we estimate the principal amount of loans that will default over the next two years (two years being the expected period between a loss event and default) and how much we expect to recover over time related to the defaulted amount. Expected defaults less our expected recoveries equal the allowance related to this portfolio. Our historical experience indicates that, on average, the time between the date that a customer experiences a default causing event (i.e., the loss trigger event) and the date that we charge off the unrecoverable portion of that loan is two years. Separately, for our TDR portfolio, we estimate an allowance amount sufficient to cover life-of-loan expected losses through an impairment calculation based on the difference between the loan's basis and the present value of expected future cash flows (which would include life-of-loan default and recovery assumptions) discounted at the loan's original effective interest rate. Our TDR portfolio is comprised mostly of loans with forbearance usage greater than three months and interest rate reductions. The separate allowance estimates for our TDR and non-TDR portfolios are combined into our total allowance for Private Education Loan losses.

In estimating both the non-TDR and TDR allowance amounts, we start with historical experience of customer default behavior. We make judgments about which historical period to start with and then make further judgments about whether that historical experience is representative of future expectations and whether additional adjustments may be needed to those historical default rates. We also take the economic environment into consideration when calculating the allowance for loan losses. We analyze key economic statistics and the effect we expect them to have on future defaults. Key economic statistics analyzed as part of the allowance for loan losses are primarily unemployment rates. Our allowance for loan losses is estimated using an analysis of delinquent and current accounts. Our model is used to estimate the likelihood that a loan may progress through the various delinquency stages and ultimately charge off. The evaluation of the allowance for loan losses is inherently subjective, as it requires material estimates that may be susceptible to significant changes. The estimate for the allowance for loan losses is subject to a number of assumptions. If actual future performance in delinquency, charge-offs and recoveries are significantly different than estimated, this could materially affect our estimate of the allowance for loan losses and the related provision for loan losses on our income statement.

2. Significant Accounting Policies (Continued)

We determine the collectability of our Private Education Loan portfolio by evaluating certain risk characteristics. We consider school type, credit score (FICO), existence of a cosigner, loan status and loan seasoning as the key credit quality indicators because they have the most significant effect on our determination of the adequacy of our allowance for loan losses. The type of school customers attend can have an impact on their graduation rate and job prospects after graduation and therefore affects their ability to make payments. Credit scores are an indicator of the credit worthiness of a customer and the higher the credit score the more likely it is the customer will be able to make all of their contractual payments. Loan status affects the credit risk because a past due loan is more likely to result in a credit loss than an up-to-date loan. Additionally, loans in a deferred payment status have different credit risk profiles compared with those in current payment status. Of the portfolio in repayment, loan seasoning is an important factor. It affects credit risk because a loan with a history of making payments generally has a lower incidence of default than a loan with a history of making infrequent or no payments. The existence of a cosigner lowers the likelihood of default. We monitor and update these credit quality indicators in the analysis of the adequacy of our allowance for loan losses on a quarterly basis.

To estimate the probable credit losses incurred in the loan portfolio at the reporting date, we use historical experience of customer payment behavior in connection with the key credit quality indicators and incorporate management expectations regarding macroeconomic and collection performance factors. Our model is based upon the most recent twelve months of actual collection experience as the starting point for the non-TDR portfolio and the most recent approximate 10 years for the TDR portfolio and applies expected macroeconomic changes and collection procedure changes to estimate expected losses caused by loss events incurred as of the balance sheet date. Our model for the non-TDR portfolio places a greater emphasis on the more recent default experience rather than the default experience for older historical periods, as we believe the more recent default experience is more indicative of the probable losses incurred in the loan portfolio today that will default over the next two years. The TDR portfolio uses a longer historical default experience since we are projecting life of loan remaining losses. Similar to estimating defaults, we use historical customer payment behavior to estimate the timing and amount of future recoveries on charged-off loans. We use judgment in determining whether historical performance is representative of what we expect to collect in the future. We then apply the default and collection rate projections to each category of loans. Once the quantitative calculation is performed, we review the adequacy of the allowance for loan losses and determine if qualitative adjustments need to be considered. Additionally, we consider changes in laws and regulations that could potentially impact the allowance for loan losses. More judgment has been required over the last several years, compared with years prior, in light of the U.S. economy and its effect on our customers' ability to pay their obligations. We believe that our model reflects recent customer behavior, loan performance, and collection performance, as well as expectations about economic factors.

Our collection policies allow for periods of nonpayment for customers requesting additional payment grace periods upon leaving school or experiencing temporary difficulty meeting payment obligations. This is referred to as forbearance status and is considered in our allowance for loan losses. The loss confirmation period is in alignment with our typical collection cycle and takes into account these periods of nonpayment.

Our allowance for Private Education Loan losses also provides for possible additional future charge-offs as they occur related to the receivable for partially charged-off Private Education Loans. At the end of each month, for loans that are 212 days past due, we charge off the estimated loss of a defaulted loan balance. Actual recoveries are applied against the remaining loan balance that was not charged off. We refer to this remaining loan balance as the "receivable for partially charged-off loans." If actual periodic recoveries are less than expected, the difference is immediately charged off through the allowance for loan losses with an offsetting reduction in the receivable for partially charged-off Private Education Loans. If actual periodic recoveries are greater than expected, they will be reflected as a recovery through the allowance for Private Education Loan

2. Significant Accounting Policies (Continued)

losses once the cumulative recovery amount exceeds the cumulative amount originally expected to be recovered. Private Education Loans which defaulted between 2007 through March 31, 2015, experienced collection performance below our pre-financial crisis experience. As a result, we began building a reserve for shortfalls in recoveries until we could determine the long-term post-default recovery rate. In the second quarter of 2015, the portion of the loan amount charged off at default increased from 73 percent to 79 percent. This did not impact the provision for loan losses as previously this had been reserved through the allowance for loan losses. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

Allowance for FFELP Loan Losses

FFELP Loans are insured as to their principal and accrued interest in the event of default subject to a Risk Sharing level based on the date of loan disbursement. These insurance obligations are supported by contractual rights against the United States. For loans disbursed after October 1, 1993, and before July 1, 2006, we receive 98 percent reimbursement on all qualifying default claims. For loans disbursed on or after July 1, 2006, we receive 97 percent reimbursement. For loans disbursed prior to October 1, 1993, we receive 100 percent reimbursement.

Similar to the allowance for Private Education Loan losses, the allowance for FFELP Loan losses uses historical experience of customer default behavior and a two-year loss confirmation period to estimate the credit losses incurred in the loan portfolio at the reporting date. We apply the default rate projections, net of applicable Risk Sharing, to each category for the current period to perform our quantitative calculation. Once the quantitative calculation is performed, we review the adequacy of the allowance for loan losses and determine if qualitative adjustments need to be considered. For FFELP Loans that have lost their government insurance and have been charged off, any subsequent cash recoveries benefit the allowance for loan losses when received.

Investments

Our available-for-sale investment portfolio consists of investments that are carried at fair value, with the temporary changes in fair value carried as a separate component of stockholders' equity, net of taxes. The amortized cost of debt securities in this category is adjusted for premiums and accretion of discounts, which are amortized using the effective interest rate method. Other-than-temporary impairment is evaluated by considering several factors, including the length of time and extent to which the fair value has been less than the amortized cost basis, the financial condition and near-term prospects of the security (considering factors such as adverse conditions specific to the security and ratings agency actions), and the intent and ability to retain the investment to allow for an anticipated recovery in fair value. The entire fair value loss on a security that is other-than-temporary impairment is recorded in earnings if we intend to sell the security or if it is more likely than not that we will be required to sell the security before the expected recovery of the loss. However, if the impairment is other-than-temporary, and those two conditions do not exist, the portion of the impairment related to credit losses is recorded in earnings and the impairment related to other factors is recorded in other comprehensive income. Securities classified as trading are accounted for at fair value with unrealized gains and losses included in investment income. Securities that we have the intent and ability to hold to maturity are classified as held-to-maturity and are accounted for at amortized cost unless the security is determined to have an other-than-temporary impairment. In this case it is accounted for in the same manner described above.

We also have other investments, primarily a receivable for cash collateral posted to derivative counterparties which is accounted for at amortized cost in other investments.

2. Significant Accounting Policies (Continued)

Cash and Cash Equivalents

Cash and cash equivalents can include term federal funds, Eurodollar deposits, commercial paper, asset-backed commercial paper, treasuries and money market funds with original terms to maturity of less than three months.

Restricted Cash and Investments

Restricted cash primarily includes amounts held in education loan securitization trusts and other secured borrowings. This cash must be used to make payments related to trust obligations. Amounts on deposit in these accounts are primarily the result of timing differences between when principal and interest is collected on the trust assets and when principal and interest is paid on trust liabilities. As such, changes in this balance are reflected in investing activities in the statement of cash flows.

Securities pledged as collateral related to our derivative portfolio, where the counterparty has rights to replace the securities, are classified as restricted. When the counterparty does not have these rights, the security is recorded in investments and disclosed as pledged collateral in the notes. Additionally, certain counterparties require cash collateral pledged to us to be segregated and held in restricted cash accounts.

Goodwill and Acquired Intangible Assets

Goodwill is not amortized but is tested periodically for impairment. We test goodwill for impairment annually as of October 1 at the reporting unit level, which is the same as or one level below a business segment. Goodwill is also tested at interim periods if an event occurs or circumstances change that would indicate the carrying amount may be impaired.

We assess qualitative factors to determine whether it is “more-likely-than-not” that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test. The “more-likely-than-not” threshold is defined as having a likelihood of more than 50 percent. If, after assessing relevant qualitative factors, we conclude that it is “more-likely-than-not” that the fair value of a reporting unit as of October 1 is less than its carrying amount, we will complete Step 1 of the goodwill impairment analysis. Step 1 consists of a comparison of the fair value of the reporting unit to the reporting unit’s carrying value, including goodwill. If the carrying value of the reporting unit exceeds the fair value, Step 2 in the goodwill impairment analysis is performed to measure the amount of impairment loss, if any. Step 2 of the goodwill impairment analysis compares the implied fair value of the reporting unit’s goodwill to the carrying value of the reporting unit’s goodwill. The implied fair value of goodwill is determined in a manner consistent with determining goodwill in a business combination. If the carrying amount of the reporting unit’s goodwill exceeds the implied fair value of the goodwill, an impairment loss is recognized in an amount equal to that excess.

Acquired intangible assets include, but are not limited to, trade names, customer and other relationships, and non-compete agreements. Acquired intangible assets with finite lives are amortized over their estimated useful lives in proportion to their estimated economic benefit. Finite-lived acquired intangible assets are reviewed for impairment using an undiscounted cash flow analysis when an event occurs or circumstances change indicating the carrying amount of a finite-lived asset or asset group may not be recoverable. If the carrying amount of the asset or asset groups exceeds the undiscounted cash flows, the fair value of the asset or asset group is determined using an acceptable valuation technique. An impairment loss would be recognized if the carrying amount of the asset (or asset group) exceeds the fair value of the asset or asset group. The impairment loss recognized would be the difference between the carrying amount and fair value. Indefinite-life acquired intangible assets are not

2. Significant Accounting Policies (Continued)

amortized. We test these indefinite-life acquired intangible assets for impairment annually as of October 1 or at interim periods if an event occurs or circumstances change that would indicate the carrying value of these assets may be impaired. The annual or interim impairment test of indefinite-life acquired intangible assets is based primarily on a discounted cash flow analysis.

Securitization Accounting

Our securitizations use a two-step structure with a special purpose entity that legally isolates the transferred assets from us, even in the event of bankruptcy. Transactions receiving sale treatment are also structured to ensure that the holders of the beneficial interests issued are not constrained from pledging or exchanging their interests, and that we do not maintain effective control over the transferred assets. If these criteria are not met, then the transaction is accounted for as an on-balance sheet secured borrowing. In all cases, irrespective of whether they qualify as accounting sales our securitizations are legally structured to be sales of assets that isolate the transferred assets from us. If a securitization qualifies as a sale, we then assess whether we are the primary beneficiary of the securitization trust (VIE) and are required to consolidate such trust. If we are the primary beneficiary, then no gain or loss is recognized. See "Consolidation" of this Note 2 for additional information regarding the accounting rules for consolidation when we are the primary beneficiary of these trusts.

Irrespective of whether a securitization receives sale or on-balance sheet treatment, our continuing involvement with our securitization trusts is generally limited to:

- Owning the equity certificates of certain trusts.
- The servicing of the education loan assets within the securitization trusts, on both a pre- and post-default basis.
- Our acting as administrator for the securitization transactions we sponsored, which includes remarketing certain bonds at future dates.
- Our responsibilities relative to representation and warranty violations.
- Temporarily advancing to the trust certain borrower benefits afforded the borrowers of education loans that have been securitized. These advances subsequently are returned to us in the next quarter.
- Certain back-to-back derivatives entered into by us contemporaneously with the execution of derivatives by certain Private Education Loan securitization trusts.
- The option held by us to buy certain delinquent loans from certain Private Education Loan securitization trusts.
- The option to exercise the clean-up call and purchase the education loans from the trust when the asset balance is 10 percent or less of the original loan balance.
- The option, on some trusts, to purchase education loans aggregating up to 10 percent of the trust's initial pool balance.
- The option (in certain trusts) to call rate reset notes in instances where the remarketing process has failed.

The investors of the securitization trusts have no recourse to our other assets should there be a failure of the trusts to pay when due. Generally, the only arrangements under which we have to provide financial support to the trusts are representation and warranty violations requiring the buyback of loans.

Under the terms of the transaction documents of certain trusts, we have, from time to time, exercised our options to purchase delinquent loans from Private Education Loan trusts, to purchase the remaining loans from

2. Significant Accounting Policies (Continued)

trusts once the loan balance falls below 10 percent of the original amount, to purchase education loans up to 10 percent of the trust's initial balance, or to call rate reset notes. Certain trusts maintain financial arrangements with third parties also typical of securitization transactions, such as derivative contracts (swaps) and bond insurance policies that, in the case of a counterparty failure, could adversely impact the value of any Residual Interest.

We do not record servicing assets or servicing liabilities when our securitization trusts are accounted for as on-balance sheet secured financings. As of December 31, 2017, we have $25 million of servicing assets on our balance sheet, of which $11 million is related to Residual Interests in FFELP Loan securitization trusts we sold in 2013 and $14 million is related to the acquisition of Earnest in 2017.

Education Loan Interest Income

For loans classified as held-for-investment, we recognize education loan interest income as earned, adjusted for the amortization of premiums (which includes purchased premiums and capitalized direct origination costs), discounts and Repayment Borrower Benefits. These adjustments result in income being recognized based upon the expected yield of the loan over its life after giving effect to expected prepayments. We amortize premium and discount on education loans using a CPR which measures the rate at which loans in the portfolio pay down principal compared to their stated terms. In determining the CPR, we only consider payments made in excess of contractually required payments. This would include loan consolidation and other early payoff activity. For Repayment Borrower Benefits, the estimates of their effect on education loan yield are based on analyses of historical payment behavior of customers who are eligible for the incentives and its effect on the ultimate qualification rate for these incentives. We regularly evaluate the assumptions used to estimate the prepayment speeds and the qualification rates used for Repayment Borrower Benefits. In instances where there are changes to the assumptions, amortization is adjusted on a cumulative basis to reflect the change since the acquisition of the loan. Additionally, interest earned on education loans reflects potential non-payment adjustments in accordance with our uncollectible interest recognition policy as discussed further in "Allowance for Loan Losses" of this Note 2. We do not amortize any premiums, discounts or other adjustments to the basis of education loans when they are classified as held-for-sale. See "Allowance for Loan Losses — Purchased Credit Impaired ('PCI') Loans" and "— Purchased Non-Credit Impaired Loans" of this Note 2 for discussion of the interest income methodology related to those portfolios.

Interest Expense

Interest expense is based upon contractual interest rates adjusted for the amortization of debt issuance costs, premiums and discounts. Our interest expense may also be adjusted for net payments/receipts related to interest rate and foreign currency swap agreements that qualify and are designated as hedges. Interest expense also includes the amortization of deferred gains and losses on closed hedge transactions that qualified as hedges. Amortization of debt issuance costs, premiums, discounts and terminated hedge-basis adjustments are recognized using the effective interest rate method.

Servicing Revenue

We perform loan servicing functions for third-parties in return for a servicing fee. Our compensation is typically based on a per-unit fee arrangement or a percentage of the loans outstanding. We recognize servicing revenues associated with these activities based upon the contractual arrangements as the services are rendered. We recognize late fees on third-party serviced loans as well as on loans in our portfolio according to the contractual provisions of the promissory notes, as well as our expectation of collectability.

2. Significant Accounting Policies (Continued)

Asset Recovery and Business Processing Revenue

Asset recovery fees are received for collections or rehabilitation of delinquent or defaulted debt on behalf of clients performed on a contingency basis. Revenue is earned and recognized upon the completion of rehabilitation activities or upon receipt of the delinquent customer funds.

We also receive fees from Guarantor agencies for performing default aversion services on delinquent loans prior to default. The fee is received when the loan is initially placed with us and we are obligated to provide such services for the remaining life of the loan for no additional fee. In the event that the loan defaults, in accordance with certain contracts, we are obligated to rebate a portion of the fee to the Guarantor agency in proportion to the principal and interest outstanding when the loan defaults. We defer the fees received, net of an estimate of future rebates owed due to subsequent defaults, and recognize such fees over the service period which is estimated to be the life of the loan.

In the third quarter of 2017, $47 million of previously deferred asset recovery revenue, net of a reserve, was recognized as revenue related to loans for which the Company performs these default aversion services. In the third quarter of 2017, the Company was notified that it would no longer perform these services after 2017 due to the termination of the related contract as of December 31, 2017. In accordance with GAAP, we recognized this previously deferred revenue during the third-quarter 2017 to reflect a shortened period over which it is expected to be earned.

Business processing fees are received generally based on processing transactions. Revenue is earned and recognized upon the completion of processing the transaction and in some cases also upon the processing of a payment.

Transfer of Financial Assets and Extinguishments of Liabilities

We account for loan sales and debt repurchases in accordance with the applicable accounting guidance. Our securitizations and other secured borrowings are accounted for as on-balance sheet secured borrowings. See "Securitization Accounting" of this Note 2 for further discussion on the criteria assessed to determine whether a transfer of financial assets is a sale or a secured borrowing. If a transfer of loans qualifies as a sale, we derecognize the loan and recognize a gain or loss as the difference between the carrying basis of the loan sold and liabilities retained and the compensation received.

We periodically repurchase our outstanding debt in the open market or through public tender offers. We record a gain or loss on the early extinguishment of debt based upon the difference between the carrying cost of the debt and the amount paid to the third party and is net of hedging gains and losses when the debt is in a qualifying hedge relationship.

We recognize the results of a transfer of loans and the extinguishment of debt based upon the settlement date of the transaction.

Derivative Accounting

The accounting guidance for our derivative instruments, which primarily includes interest rate swaps, cross-currency interest rate swaps and Floor Income Contracts, requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded at fair value on the balance sheet as either an asset or liability. Derivative positions are recorded as net positions by counterparty based on master netting arrangements exclusive of accrued interest and cash collateral held or pledged.

2. Significant Accounting Policies (Continued)

Many of our derivatives, mainly fixed to variable or variable to fixed interest rate swaps and cross-currency interest rate swaps, qualify as effective hedges. For these derivatives, the relationship between the hedging instrument and the hedged items (including the hedged risk and method for assessing effectiveness), as well as the risk management objective and strategy for undertaking various hedge transactions at the inception of the hedging relationship, is documented. Each derivative is designated to either a specific (or pool of) asset(s) or liability(ies) on the balance sheet or expected future cash flows, and designated as either a "fair value" or a "cash flow" hedge. Fair value hedges are designed to hedge our exposure to changes in fair value of a fixed rate or foreign denominated asset or liability, while cash flow hedges are designed to hedge our exposure to variability of either a floating rate asset's or liability's cash flows or an expected fixed rate debt issuance. For effective fair value hedges, both the derivative and the hedged item (for the risk being hedged) are marked-to-market with any difference reflecting ineffectiveness and recorded immediately in the statement of income. For effective cash flow hedges, the change in the fair value of the derivative is recorded in other comprehensive income, net of tax, and recognized in earnings in the same period as the earnings effects of the hedged item. The ineffective portion of a cash flow hedge is recorded immediately through earnings. The assessment of the hedge's effectiveness is performed at inception and on an ongoing basis, generally using regression testing. For hedges of a pool of assets or liabilities, tests are performed to demonstrate the similarity of individual instruments of the pool. When it is determined that a derivative is not currently an effective hedge, ineffectiveness is recognized for the full change in value of the derivative with no offsetting mark-to-market of the hedged item for the current period. If it is also determined the hedge will not be effective in the future, we discontinue the hedge accounting prospectively, cease recording changes in the fair value of the hedged item, and begin amortization of any basis adjustments that exist related to the hedged item.

We also have derivatives, primarily Floor Income Contracts and certain basis swaps, that we believe are effective economic hedges but do not qualify for hedge accounting treatment. These derivatives are classified as "trading" and as a result they are marked-to-market through earnings with no consideration for the fair value fluctuation of the economically hedged item.

The "gains (losses) on derivative and hedging activities, net" line item in the consolidated statements of income includes the unrealized changes in the fair value of our derivatives (except effective cash flow hedges which are recorded in other comprehensive income), the unrealized changes in fair value of hedged items in qualifying fair value hedges, as well as the realized changes in fair value related to derivative net settlements and dispositions that do not qualify for hedge accounting. Net settlement income/expense on derivatives that qualify as hedges are included with the income or expense of the hedged item (mainly interest expense).

Accounting for Stock-Based Compensation

We recognize stock-based compensation cost in our consolidated statements of income using the fair value based method. Under this method we determine the fair value of the stock-based compensation at the time of the grant and recognize the resulting compensation expense over the grant's vesting period. We record stock-based compensation expense net of estimated forfeitures and as such, only those stock-based awards that we expect to vest are recorded. We estimate the forfeiture rate based on historical forfeitures of equity awards and adjust the rate to reflect changes in facts and circumstances, if any. Ultimately, the total expense recognized over the vesting period will equal the fair value of awards that actually vest.

Restructuring and Other Reorganization Expenses

From time to time we implement plans to restructure our business. In conjunction with these restructuring plans, involuntary benefit arrangements, disposal costs (including contract termination costs and other exit costs),

2. Significant Accounting Policies (Continued)

as well as certain other costs that are incremental and incurred as a direct result of our restructuring plans, are classified as restructuring expenses in the consolidated statements of income.

The Company administers the Navient Corporation Employee Severance Plan and the Navient Corporation Executive Severance Plan for Senior Officers (collectively, "the Severance Plan"). The Severance Plan provides severance benefits in the event of termination of the Company's full-time employees and part-time employees who work at least 24 hours per week. The Severance Plan establishes specified benefits based on base salary, job level immediately preceding termination and years of service upon involuntary termination of employment. The benefits payable under the Severance Plan relate to past service, and they accumulate and vest. Accordingly, we recognize severance expenses to be paid pursuant to the Severance Plan when payment of such benefits is probable and can be reasonably estimated in accordance with ASC 712, "Compensation — Nonretirement Postemployment Benefits." Such benefits, include severance pay calculated based on the Severance Plan, medical and dental benefits, and outplacement services expenses.

Contract termination costs are expensed at the earlier of (1) the contract termination date or (2) the cease use date under the contract. Other exit costs are expensed as incurred and classified as restructuring expenses if (1) the cost is incremental to and incurred as a direct result of planned restructuring activities and (2) the cost is not associated with or incurred to generate revenues subsequent to our consummation of the related restructuring activities.

Other reorganization expenses include certain internal costs and third-party costs incurred in connection with our cost reduction initiatives.

During the fourth quarter of 2017, the Company incurred $29 million of restructuring and other reorganization expense in connection with an effort that will reduce costs and improve operating efficiency. The charge related primarily to severance-related costs.

During the second quarter of 2015, the Company launched an initiative to simplify and streamline its management structure following the Spin-Off of SLM BankCo to improve the operating efficiency and effectiveness of the organization. As part of the Company's streamlining efforts, restructuring and other reorganization expenses of $29 million were recognized in 2015, primarily related to severance costs.

Income Taxes

We account for income taxes under the asset and liability approach which requires the recognition of deferred tax liabilities and assets for the expected future tax consequences of temporary differences between the carrying amounts and tax basis of our assets and liabilities. To the extent tax laws change, deferred tax assets and liabilities are adjusted in the period that the tax change is enacted. See "Note 14 — Income Taxes" for a description of the impact of the "Tax Cuts and Jobs Act" ("TCJA") on the net deferred tax asset as of December 31, 2017.

"Income tax expense/(benefit)" includes (i) deferred tax expense/(benefit), which represents the net change in the deferred tax asset or liability balance during the year plus any change in a valuation allowance and (ii) current tax expense/(benefit), which represents the amount of tax currently payable to or receivable from a tax authority plus amounts accrued for unrecognized tax benefits. Income tax expense/(benefit) excludes the tax effects related to adjustments recorded in equity.

If we have an uncertain tax position, then that tax position is recognized only if it is more likely than not to be sustained upon examination based on the technical merits of the position. The amount of tax benefit

2. Significant Accounting Policies (Continued)

recognized in the financial statements is the largest amount of benefit that is more than 50 percent likely of being sustained upon ultimate settlement of the uncertain tax position. We recognize interest related to unrecognized tax benefits in income tax expense/(benefit) and penalties, if any, in operating expenses.

Earnings (Loss) per Common Share

We compute earnings (loss) per common share ("EPS") by dividing net income allocated to common shareholders by the weighted average common shares outstanding. Net income allocated to common shareholders represents net income applicable to common shareholders. Diluted earnings per common share is computed by dividing income allocated to common shareholders by the weighted average common shares outstanding plus amounts representing the dilutive effect of stock options outstanding, restricted stock, restricted stock units, and the outstanding commitment to issue shares under the Employee Stock Purchase Plan. See "Note 10 — Earnings (Loss) per Common Share" for further discussion.

Reclassifications

Certain reclassifications have been made to the balances as of and for the years ended December 31, 2016 and 2015, to be consistent with classifications adopted for 2017, which had no effect on net income, total assets or total liabilities.

Recently Issued Accounting Pronouncements

Revenue Recognition

On May 28, 2014, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers," which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The new guidance supersedes current U.S. GAAP guidance on revenue recognition and requires the use of more estimates and judgements than the current revenue standards. The new guidance does not apply to revenue associated with financial instruments that are accounted for under other U.S. GAAP. Accordingly, the new revenue recognition guidance does not have an impact on our consolidated results of operations associated with our loan portfolios, investments and derivatives.

We adopted the new standard as of January 1, 2018, the effective date, utilizing the cumulative effect transition method. In conjunction with our implementation plan, we identified revenue streams within our Business Services segment that are within scope of the new standard and reviewed related contracts. We concluded that the new standard does not result in a material change in the timing of revenue or expense recognition, or the presentation/classification of such revenue and expense. Under the new standard, we will expand our revenue disclosures in the first quarter of 2018.

Classification and Measurement

On January 5, 2016, the FASB issued ASU No. 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities," which reconsiders the classification and measurement of financial instruments. The new standard requires certain equity instruments be measured at fair value, with fair value changes recognized in earnings. In addition, the standard requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption. It will be effective for the Company as of January 1, 2018. We have concluded that adopting this new accounting standard will be immaterial to our consolidated financial statements and footnote disclosures.

2. Significant Accounting Policies (Continued)

Leases

On February 25, 2016, the FASB issued ASU No. 2016-02, "Leases," which requires the identification of arrangements that should be accounted for as leases by lessees. In general, lease arrangements exceeding a twelve-month term must be recognized as assets and liabilities on the balance sheet of the lessee. A right-of-use asset and lease obligation will be recorded for all leases with a term exceeding twelve months, whether operating or financing, while the income statement will reflect lease expense for operating leases and amortization/interest expense for financing leases. The balance sheet amount recorded for existing leases at the date of adoption must be calculated using the applicable incremental borrowing rate at the date of adoption. The standard requires the use of the modified retrospective transition method, which will require adjustment to all comparative periods presented. It will be effective for the Company as of January 1, 2019. Early adoption is permitted. We continue to assess the impact that adopting this new accounting standard will have on our consolidated financial statements and footnote disclosures, but expect it to be immaterial.

Stock Compensation

On March 30, 2016, the FASB issued ASU No. 2016-09, "Compensation — Stock Compensation," which identifies areas for simplification involving several aspects of accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, an option to recognize gross stock compensation expense with actual forfeitures recognized as they occur, as well as certain classifications on the statement of cash flows. The new standard also requires that all excess tax benefits and tax deficiencies that pertain to employee stock-based incentive payments be recognized within income tax expense in the consolidated statements of income, rather than as previously reported within additional paid-in capital. The new standard was adopted on January 1, 2017. In the year ended December 31, 2017, this new standard resulted in a $5 million reduction to income tax expense.

Allowance for Loan Losses

On June 16, 2016, the FASB issued ASU No. 2016-13, "Financial Instruments — Credit Losses," which requires measurement and recognition of an allowance for loan loss that estimates remaining expected credit losses for financial assets held at the reporting date. Our current allowance for loan loss is an incurred loss model. As a result, we expect the new guidance will result in an increase to our allowance for loan losses. The standard is to be applied through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The standard is effective for the Company as of January 1, 2020, and will primarily impact the allowance for loan losses related to our Private Education Loans and FFELP Loans. Early adoption is permitted on January 1, 2019. This standard represents a significant departure from existing GAAP, and may result in material changes to the Company's accounting for the allowance for loan losses. We are currently evaluating the impact of adopting this accounting standard on our consolidated financial statements and footnote disclosures.

Intra-Entity Transfer of Assets

On October 24, 2016, the FASB issued ASU No. 2016-16, "Income Taxes — Intra-Entity Transfer of Assets Other and Inventory," which requires recognition of the income tax consequences of an intra-entity transfer of non-inventory assets when the transfer occurs. The new standard is effective for the Company as of January 1, 2018. We have concluded that adopting this new accounting standard will be immaterial to our consolidated financial statements and footnote disclosures.

2. Significant Accounting Policies (Continued)

Hedging Activities

On August 28, 2017, the FASB issued ASU No. 2017-12, "Derivatives and Hedging," which better aligns risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The amendments expand and refine hedge accounting for both nonfinancial and financial risk components and in some situations better align the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The new standard will be effective for the Company as of January 1, 2019. Early adoption is permitted. We are currently assessing the impact this new standard will have on our consolidated financial statements and footnote disclosures.

3. Education Loans

Education loans consist of FFELP and Private Education Loans.

There are three principal categories of FFELP Loans: Stafford, PLUS, and FFELP Consolidation Loans. Generally, Stafford and PLUS Loans have repayment periods of between five and ten years. FFELP Consolidation Loans have repayment periods of twelve to thirty years. FFELP Loans do not require repayment, or have modified repayment plans, while the customer is in-school and during the grace period immediately upon leaving school. The customer may also be granted a deferment or forbearance for a period of time based on need, during which time the customer is not considered to be in repayment. Interest continues to accrue on loans in the in-school, deferment and forbearance period. FFELP Loans obligate the customer to pay interest at a stated fixed rate or a variable rate reset annually (subject to a cap) on July 1 of each year depending on when the loan was originated and the loan type. FFELP Loans disbursed before April 1, 2006 earn interest at the greater of the borrower's rate or a floating rate based on the Special Allowance Payment ("SAP") formula, with the interest earned on the floating rate that exceeds the interest earned from the customer being paid directly by ED. In low or certain declining interest rate environments when education loans are earning at the fixed borrower rate and the interest on the funding for the loans is variable and declining, we can earn additional spread income that we refer to as Floor Income. For loans disbursed after April 1, 2006, FFELP Loans effectively only earn at the SAP rate, as the excess interest earned when the borrower rate exceeds the SAP rate (Floor Income) is required to be rebated to ED.

FFELP Loans are insured as to their principal and accrued interest in the event of default subject to a Risk Sharing level based on the date of loan disbursement. These insurance obligations are supported by contractual rights against the United States. For loans disbursed after October 1, 1993 and before July 1, 2006, we receive 98 percent reimbursement on all qualifying default claims. For loans disbursed on or after July 1, 2006, we receive 97 percent reimbursement.

Private Education Loans bear the full credit risk of the customer. Private Education Loans generally carry a variable rate indexed to LIBOR or Prime indices. The majority of loans in our portfolio are cosigned. Similar to FFELP loans, Private Education Loans are generally non-dischargeable in bankruptcy. Most loans have repayment terms of 10 to 15 years or more, and for loans made prior to 2009, payments are typically deferred until after graduation. However, since 2009 we began to encourage interest-only or fixed payment options while the customer is enrolled in school.

3. Education Loans (Continued)

The estimated weighted average life of education loans in our portfolio was approximately 7 years at both December 31, 2017 and 2016. The following table reflects the distribution of our education loan portfolio by program.

(Dollars in millions)	December 31, 2017		Year Ended December 31, 2017	
	Ending Balance	% of Balance	Average Balance	Average Effective Interest Rate
FFELP Stafford and Other Education Loans, net[1]	$ 28,409	27%	$ 30,462	2.94%
FFELP Consolidation Loans, net	53,294	51	54,527	3.30
Private Education Loans, net	23,419	22	23,762	6.88
Total education loans, net	$105,122	100%	$108,751	3.98%

(Dollars in millions)	December 31, 2016		Year Ended December 31, 2016	
	Ending Balance	% of Balance	Average Balance	Average Effective Interest Rate
FFELP Stafford and Other Education Loans, net[1]	$ 32,319	29%	$ 34,710	2.31%
FFELP Consolidation Loans, net	55,411	50	57,787	2.98
Private Education Loans, net	23,340	21	25,361	6.26
Total education loans, net	$111,070	100%	$117,858	3.49%

(1) Primarily Stafford Loans, but also includes federally guaranteed PLUS and HEAL Loans.

As of December 31, 2017 and 2016, 86 percent and 83 percent, respectively, of our education loan portfolio was in repayment.

Loan Sales

In 2015, we sold $412 million of FFELP Loans for a $12 million gain and $178 million of low-interest rate Private Education Loans for a $21 million loss. There were no loan sales in 2016 or 2017.

4. Allowance for Loan Losses

Our provisions for loan losses represent the periodic expense of maintaining an allowance sufficient to absorb incurred probable losses, net of expected recoveries, in the held-for-investment loan portfolios. The evaluation of the provisions for loan losses is inherently subjective, as it requires material estimates that may be susceptible to significant changes. We segregate our Private Education portfolio into two classes of loans in monitoring and assessing credit risk — Troubled Debt Restructurings ("TDRs") and Non-TDRs. We believe that the allowance for loan losses is appropriate to cover probable losses incurred in the loan portfolios.

4. Allowance for Loan Losses (Continued)

Allowance for Loan Losses Metrics

	Year Ended December 31, 2017			
(Dollars in millions)	**FFELP Loans**	**Private Education Loans**	**Other Loans**	**Total**
Allowance for Loan Losses				
Beginning balance	$ 67	$ 1,351	$ 15	$ 1,433
Total provision	42	382	2	426
Charge-offs[1]	(49)	(443)	(7)	(499)
Reclassification of interest reserve[2]	—	7	—	7
Ending balance	$ 60	$ 1,297	$ 10	$ 1,367
Allowance Ending Balance:				
Individually evaluated for impairment — TDR	$ —	$ 1,171	$ 9	$ 1,180
Collectively evaluated for impairment:				
Excluding Purchased Non-Credit Impaired Loans acquired at a discount and Purchased Credit Impaired Loans	60	126	1	187
Purchased Non-Credit Impaired Loans acquired at a discount[3]	—	—	—	—
Purchased Credit Impaired Loans[3]	—	—	—	—
Ending total allowance	$ 60	$ 1,297	$ 10	$ 1,367
Loans Ending Balance:				
Individually evaluated for impairment — TDR	$ —	$10,921	$ 30	$ 10,951
Collectively evaluated for impairment:				
Excluding Purchased Non-Credit Impaired Loans acquired at a discount and Purchased Credit Impaired Loans	77,860	11,861	40	89,761
Purchased Non-Credit Impaired Loans acquired at a discount[3]	3,237	2,610	—	5,847
Purchased Credit Impaired Loans[3]	—	248	—	248
Ending total loans[4]	$81,097	$25,640	$ 70	$106,807
Charge-offs as a percentage of average loans in repayment	.07%	1.98%	5.39%	
Allowance coverage of charge-offs	1.2	2.9	1.5	
Allowance as a percentage of the ending total loan balance[3]	.07%	5.06%	14.32%	
Allowance as a percentage of the ending loans in repayment[3]	.09%	5.66%	14.32%	
Ending total loans[4]	$81,097	$25,640	$ 70	
Average loans in repayment	$68,318	$22,342	$ 130	
Ending loans in repayment	$67,853	$22,924	$ 70	

(1) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See "Receivable for Partially Charged-Off Private Education Loans" for further discussion.

(2) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan's principal balance.

(3) See "Note 2 — Significant Accounting Policies — Allowance for Loan Losses" for a description of our policy for the $6.5 billion of loans ($3.5 billion of FFELP and $3.0 billion of Private Education) purchased in 2017 accounted for as either Purchased Credit Impaired Loans or Purchased Non-Credit Impaired Loans. The Purchased Credit Impaired Loans' losses are not provided for by the allowance for loan losses in the above table as these loans are separately reserved for, if needed. No allowance for loan losses has been established for these loans as of December 31, 2017. The losses of the Purchased Non-Credit Impaired Loans acquired at a discount are not provided for by the allowance for loan losses in the above table as the remaining purchased discount associated with the FFELP and Private Education Loans of $43 million and $392 million, respectively, as of December 31, 2017 is greater than the incurred losses and as a result no allowance for loan losses has been established for these loans as of December 31, 2017. As a result, excluding the $6.5 billion of loans acquired in 2017, the allowance as a percentage of the ending total loan balance and the allowance as a percentage of the ending loans in repayment would be 0.08 percent and 0.09 percent for FFELP Loans and 5.69 percent and 6.42 percent for Private Education Loans, respectively.

(4) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

(Dollars in millions)	Year Ended December 31, 2016 FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 78	$ 1,471	$ 15	$ 1,564
Total provision	43	383	3	429
Charge-offs[1]	(54)	(513)	(3)	(570)
Reclassification of interest reserve[2]	—	10	—	10
Ending balance	$ 67	$ 1,351	$ 15	$ 1,433
Allowance Ending Balance:				
Individually evaluated for impairment —TDR	$ —	$ 1,190	$ 11	$ 1,201
Collectively evaluated for impairment	67	161	4	232
Ending total allowance	$ 67	$ 1,351	$ 15	$ 1,433
Loans Ending Balance:				
Individually evaluated for impairment —TDR	$ —	$11,165	$ 32	$ 11,197
Collectively evaluated for impairment	86,918	13,983	132	101,033
Ending total loans[3]	$86,918	$25,148	$ 164	$112,230
Charge-offs as a percentage of average loans in repayment	.07%	2.20%	2.10%	
Allowance coverage of charge-offs	1.2	2.6	7.0	
Allowance as a percentage of the ending total loan balance	.08%	5.37%	9.35%	
Allowance as a percentage of the ending loans in repayment	.09%	6.10%	9.35%	
Ending total loans[3]	$86,918	$25,148	$ 164	
Average loans in repayment	$72,714	$23,275	$ 104	
Ending loans in repayment	$70,557	$22,150	$ 164	

(1) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See "Receivable for Partially Charged-Off Private Education Loans" for further discussion.

(2) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan's principal balance.

(3) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

	Year Ended December 31, 2015			
(Dollars in millions)	FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 93	$ 1,916	$ 24	$ 2,033
Total provision	46	538	(3)	581
Net adjustment resulting from the change in the charge-off rate(1)	—	(330)	—	(330)
Net charge-offs remaining(2)	(61)	(659)	(6)	(726)
Total net charge-offs	(61)	(989)	(6)	(1,056)
Reclassification of interest reserve(3)	—	11	—	11
Loan sales	—	(5)	—	(5)
Ending balance	$ 78	$ 1,471	$ 15	$ 1,564
Allowance Ending Balance:				
Individually evaluated for impairment — TDR	$ —	$ 1,209	$ 12	$ 1,221
Collectively evaluated for impairment	78	262	3	343
Ending total allowance	$ 78	$ 1,471	$ 15	$ 1,564
Loans Ending Balance:				
Individually evaluated for impairment — TDR	$ —	$10,965	$ 37	$ 11,002
Collectively evaluated for impairment	95,393	17,431	49	112,873
Ending total loans(4)	$95,393	$28,396	$ 86	$123,875
Net charge-offs as a percentage of average loans in repayment, excluding the net adjustment resulting from the change in the charge-off rate (annualized)(1)	.08%	2.55%	6.17%	
Net adjustment resulting from the change in the charge-off rate as a percentage of average loans in repayment (annualized)(1)	—%	1.28%	—%	
Allowance coverage of net charge-offs, excluding the net adjustment resulting from the change in the charge-off rate (annualized)(1)	1.3	2.2	2.5	
Allowance as a percentage of the ending total loan balance	.08%	5.18%	17.28%	
Allowance as a percentage of the ending loans in repayment	.11%	6.00%	17.28%	
Ending total loans(4)	$95,393	$28,396	$ 86	
Average loans in repayment	$75,925	$25,802	$ 97	
Ending loans in repayment	$73,838	$24,502	$ 86	

(1) In 2015, the portion of the loan amount charged off at default on Private Education Loans increased from 73 percent to 79 percent. This did not impact the provision for loan losses as previously this had been reserved through the allowance for loan losses. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

(2) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See "Receivable for Partially Charged-Off Private Education Loans" for further discussion.

(3) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan's principal balance.

(4) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

Key Credit Quality Indicators

FFELP Loans are substantially insured and guaranteed as to their principal and accrued interest in the event of default; therefore, the key credit quality indicator for this portfolio is loan status. The impact of changes in loan status is incorporated quarterly into the allowance for loan losses calculation.

	FFELP Loan Delinquencies					
	December 31,					
	2017		2016		2015	
(Dollars in millions)	Balance	%	Balance	%	Balance	%
Loans in-school/grace/deferment[1]	$ 4,711		$ 5,871		$ 8,257	
Loans in forbearance[2]	8,533		10,490		13,298	
Loans in repayment and percentage of each status:						
Loans current	59,264	87.3%	61,977	87.8%	62,651	84.8%
Loans delinquent 31-60 days[3]	2,638	3.9	2,820	4.0	3,285	4.5
Loans delinquent 61-90 days[3]	1,763	2.6	1,325	1.9	1,856	2.5
Loans delinquent greater than 90 days[3]	4,188	6.2	4,435	6.3	6,046	8.2
Total FFELP Loans in repayment	67,853	100%	70,557	100%	73,838	100%
Total FFELP Loans, gross	81,097		86,918		95,393	
FFELP Loan unamortized premium	666		879		1,087	
Total FFELP Loans	81,763		87,797		96,480	
FFELP Loan allowance for losses	(60)		(67)		(78)	
FFELP Loans, net	$81,703		$87,730		$96,402	
Percentage of FFELP Loans in repayment		83.7%		81.2%		77.4%
Delinquencies as a percentage of FFELP Loans in repayment		12.7%		12.2%		15.2%
FFELP Loans in forbearance as a percentage of loans in repayment and forbearance		11.2%		12.9%		15.3%

(1) Loans for customers who may still be attending school or engaging in other permitted educational activities and are not required to make payments on the loans, e.g., residency periods for medical students or a grace period for bar exam preparation, as well as loans for customers who have requested and qualify for other permitted program deferments such as military, unemployment or economic hardships.

(2) Loans for customers who have used their allowable deferment time or do not qualify for deferment, that need additional time to obtain employment or who have temporarily ceased making full payments due to hardship or other factors such as disaster relief.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

4. Allowance for Loan Losses (Continued)

For Private Education Loans, the key credit quality indicators are FICO scores, school type, the existence of a cosigner, the loan status and loan seasoning. The FICO scores/school type are assessed at origination. The other Private Education Loan key quality indicators can change and are incorporated quarterly into the allowance for loan losses calculation. The following table highlights the principal balance (excluding the receivable for partially charged-off loans) of our Private Education Loan portfolio stratified by the key credit quality indicators.

	Private Education Loans Credit Quality Indicators			
	TDR			
	December 31, 2017		December 31, 2016	
(Dollars in millions)	Balance[2]	% of Balance	Balance[2]	% of Balance
Credit Quality Indicators				
Original Winning FICO Scores:				
FICO 640 and above	$ 9,647	92%	$ 9,863	91%
FICO below 640	889	8	942	9
Total	$10,536	100%	$10,805	100%
School Type:				
Not-for-profit	$ 8,247	78%	$ 8,346	77%
For-profit	2,289	22	2,459	23
Total	$10,536	100%	$10,805	100%
Cosigners:				
With cosigner	$ 6,441	61%	$ 6,486	60%
Without cosigner	4,095	39	4,319	40
Total	$10,536	100%	$10,805	100%
Seasoning[1]:				
1-12 payments	$ 506	5%	$ 754	7%
13-24 payments	644	6	927	9
25-36 payments	947	9	1,289	12
37-48 payments	1,271	12	1,620	15
More than 48 payments	6,691	63	5,636	52
Not yet in repayment	477	5	579	5
Total	$10,536	100%	$10,805	100%

(1) Number of months in active repayment for which a scheduled payment was received.

(2) Balance equals the gross Private Education Loans.

4. Allowance for Loan Losses (Continued)

	Private Education Loans Credit Quality Indicators			
	Non-TDR			
	December 31, 2017		December 31, 2016	
(Dollars in millions)	Balance[2]	% of Balance	Balance[2]	% of Balance
Credit Quality Indicators				
Original Winning FICO Scores:				
FICO 640 and above	$13,752	96%	$13,120	97%
FICO below 640	592	4	408	3
Total	$14,344	100%	$13,528	100%
School Type:				
Not-for-profit	$12,431	87%	$11,338	84%
For-profit	1,913	13	2,190	16
Total	$14,344	100%	$13,528	100%
Cosigners:				
With cosigner	$ 9,193	64%	$ 9,124	67%
Without cosigner	5,151	36	4,404	33
Total	$14,344	100%	$13,528	100%
Seasoning[1]:				
1-12 payments	$ 1,424	10%	$ 586	4%
13-24 payments	437	3	344	3
25-36 payments	466	3	619	5
37-48 payments	867	6	1,103	8
More than 48 payments	10,566	74	10,062	74
Not yet in repayment	584	4	814	6
Total	$14,344	100%	$13,528	100%

(1) Number of months in active repayment for which a scheduled payment was received.

(2) Balance equals the gross Private Education Loans.

4. Allowance for Loan Losses (Continued)

	TDR Private Education Loan Delinquencies					
	December 31,					
	2017		2016		2015	
(Dollars in millions)	Balance	%	Balance	%	Balance	%
Loans in-school/grace/deferment[1]	$ 477		$ 579		$ 706	
Loans in forbearance[2]	681		588		694	
Loans in repayment and percentage of each status:						
Loans current	8,333	88.9%	8,273	85.8%	7,887	85.3%
Loans delinquent 31-60 days[3]	351	3.7	412	4.3	414	4.5
Loans delinquent 61-90 days[3]	207	2.2	267	2.8	263	2.9
Loans delinquent greater than 90 days[3]	487	5.2	686	7.1	678	7.3
Total TDR loans in repayment	9,378	100%	9,638	100%	9,242	100%
Total TDR loans, gross	10,536		10,805		10,642	
TDR loans unamortized discount	(225)		(237)		(243)	
Total TDR loans	10,311		10,568		10,399	
TDR loans receivable for partially charged-off loans	385		360		323	
TDR loans allowance for losses	(1,171)		(1,190)		(1,209)	
TDR loans, net	$ 9,525		$ 9,738		$ 9,513	
Percentage of TDR loans in repayment		89.0%		89.2%		86.8%
Delinquencies as a percentage of TDR loans in repayment		11.1%		14.2%		14.7%
Loans in forbearance as a percentage of TDR loans in repayment and forbearance		6.8%		5.7%		7.0%

(1) Deferment includes customers who have returned to school or are engaged in other permitted educational activities and are not required to make payments on the loans, e.g., residency periods for medical students or a grace period for bar exam preparation.

(2) Loans for customers who have requested extension of grace period generally during employment transition or who have temporarily ceased making full payments due to hardship or other factors such as disaster relief, consistent with established loan program servicing policies and procedures.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

4. Allowance for Loan Losses (Continued)

(Dollars in millions)	Non-TDR Private Education Loan Delinquencies December 31, 2017 Balance	%	2016 Balance	%	2015 Balance	%
Loans in-school/grace/deferment[1]	$ 584		$ 814		$ 1,334	
Loans in forbearance[2]	214		202		279	
Loans in repayment and percentage of each status:						
Loans current	13,257	97.9%	12,233	97.8%	14,844	97.3%
Loans delinquent 31-60 days[3]	120	.9	110	.9	163	1.1
Loans delinquent 61-90 days[3]	59	.4	54	.4	85	.6
Loans delinquent greater than 90 days[3]	110	.8	115	.9	168	1.0
Total non-TDR loans in repayment	13,546	100%	12,512	100%	15,260	100%
Total non-TDR loans, gross	14,344		13,528		16,873	
Non-TDR loans unamortized discount	(699)		(220)		(288)	
Total non-TDR loans	13,645		13,308		16,585	
Non-TDR loans receivable for partially charged-off loans	375		455		558	
Non-TDR loans allowance for losses	(126)		(161)		(262)	
Non-TDR loans, net	$13,894		$13,602		$16,881	
Percentage of non-TDR loans in repayment		94.4%		92.5%		90.4%
Delinquencies as a percentage of non-TDR loans in repayment		2.1%		2.2%		2.7%
Loans in forbearance as a percentage of non-TDR loans in repayment and forbearance		1.6%		1.6%		1.8%

(1) Deferment includes customers who have returned to school or are engaged in other permitted educational activities and are not required to make payments on the loans, e.g., residency periods for medical students or a grace period for bar exam preparation.

(2) Loans for customers who have requested extension of grace period generally during employment transition or who have temporarily ceased making full payments due to hardship or other factors such as disaster relief, consistent with established loan program servicing policies and procedures.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

Receivable for Partially Charged-Off Private Education Loans

At the end of each month, for loans that are 212 or more days past due, we charge off the estimated loss of a defaulted loan balance. Actual recoveries are applied against the remaining loan balance that was not charged off. We refer to this remaining loan balance as the “receivable for partially charged-off loans.” If actual periodic recoveries are less than expected, the difference is immediately charged off through the allowance for Private Education Loan losses with an offsetting reduction in the receivable for partially charged-off Private Education Loans. If actual periodic recoveries are greater than expected, they will be reflected as a recovery through the allowance for Private Education Loan losses once the cumulative recovery amount exceeds the cumulative amount originally expected to be recovered. The financial crisis, which began in 2007, impacted our collections on defaulted loans and as a result, Private Education Loans which defaulted from 2007 through March 31, 2015, experienced collection performance below our pre-financial crisis experience. For that reason, until we gained enough data and experience to determine the long-term, post-default recovery rate of 21 percent in second-quarter 2015, we established a reserve for potential shortfalls in recoveries. In the second quarter of 2015, the

4. Allowance for Loan Losses (Continued)

portion of the loan amount charged off at default increased from 73 percent to 79 percent. This did not impact the provision for loan losses as previously this had been reserved through the allowance for loan losses. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

The following table summarizes the activity in the receivable for partially charged-off loans.

(Dollars in millions)	Years Ended December 31, 2017	2016	2015
Receivable at beginning of period	$ 815	$ 881	$1,245
Expected future recoveries of current period defaults[1]	110	128	183
Recoveries[2]	(155)	(181)	(191)
Net adjustment resulting from the change in the charge-off rate[3]	—	—	(330)
Net charge-offs remaining[4]	(10)	(13)	(26)
Total net charge-offs[5]	(10)	(13)	(356)
Receivable at end of period	$ 760	$ 815	$ 881

(1) Represents our estimate of the amount to be collected in the future.

(2) Current period cash collections.

(3) In 2015, the portion of the loan amount charged off at default increased from 73 percent to 79 percent. This change resulted in a $330 million reduction to the balance of the receivable for partially charged-off loans.

(4) Represents the current period recovery shortfall — the difference between what was expected to be collected and what was actually collected.

(5) These amounts are included in total charge-offs as reported in the "Allowance for Private Education Loan Losses" table.

Troubled Debt Restructurings ("TDRs")

We sometimes modify the terms of loans for certain customers when we believe such modifications may increase the ability and willingness of a customer to make payments and thus increase the ultimate overall amount collected on a loan. These modifications generally take the form of a forbearance, a temporary interest rate reduction or an extended repayment plan. For customers experiencing financial difficulty, certain Private Education Loans for which we have granted either a forbearance of greater than three months, an interest rate reduction or an extended repayment plan are classified as TDRs. Approximately 61 percent and 61 percent of the loans granted forbearance have qualified as a TDR loan at December 31, 2017, and 2016, respectively. The unpaid principal balance of TDR loans that were in an interest rate reduction plan as of December 31, 2017 and 2016 was $2.7 billion and $2.6 billion, respectively.

At December 31, 2017 and 2016, all of our TDR loans had a related allowance recorded. The following table provides the recorded investment, unpaid principal balance and related allowance for our TDR loans.

	TDR Loans		
(Dollars in millions)	Recorded Investment[1]	Total Ending Loans[2]	Related Allowance
December 31, 2017	$10,890	$10,921	$1,171
December 31, 2016	11,119	11,165	1,190

(1) Recorded investment is equal to the unpaid principal balance (which includes the receivable for partially charged-off loans), accrued interest and unamortized discount.

(2) Total ending loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

The following table provides the average recorded investment and interest income recognized for our TDR loans.

	Years Ended December 31,					
	2017		2016		2015	
(Dollars in millions)	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized	Average Recorded Investment	Interest Income Recognized
Total	$10,989	$708	$11,078	$667	$10,770	$653

The following table provides the amount of loans modified in the periods presented that resulted in a TDR. Additionally, the table summarizes charge-offs occurring in the TDR portfolio, as well as TDRs for which a payment default occurred in the current period within 12 months of the loan first being designated as a TDR. We define payment default as 60 days past due for this disclosure.

	Years Ended December 31,								
	2017			2016			2015		
(Dollars in millions)	Modified Loans(1)	Charge-Offs(2)	Payment-Default	Modified Loans(1)	Charge-Offs(2)	Payment-Default	Modified Loans(1)	Charge-Offs(2)	Payment-Default
Total	$816	$346	$181	$1,169	$382	$265	$1,604	$459	$403

(1) Represents period ending balance of loans that have been modified during the period and resulted in a TDR.

(2) Represents loans that charged off that were classified as TDRs.

Accrued Interest Receivable

The following table provides information regarding accrued interest receivable on our Private Education Loans.

	Accrued Interest Receivable As of December 31,		
(Dollars in millions)	Total	Greater Than 90 Days Past Due	Allowance for Uncollectible Interest
2017			
TDR	$196	$20	$20
Non-TDR	187	4	6
Total	$383	$24	$26
2016			
TDR	$192	$28	$23
Non-TDR	199	5	7
Total	$391	$33	$30
2015			
TDR	$201	$28	$26
Non-TDR	289	7	9
Total	$490	$35	$35

5. Business Combinations, Goodwill and Acquired Intangible Assets

Business Combinations

Acquisitions are accounted for under the acquisition method of accounting as defined in ASC 805, "Business Combinations." The Company allocates the purchase price to the fair value of the acquired tangible assets, liabilities and identifiable intangible assets as of the acquisition date as determined by an independent appraiser.

Acquisition of Earnest

In November 2017, Navient acquired a 95 percent majority controlling interest in Earnest for approximately $149 million in cash. Earnest is a leading financial technology and education finance company that originates Private Education Refinance Loans. We have engaged an independent appraiser to assist in the valuation of the assets acquired and liabilities assumed including identifiable intangible assets, primarily the trade name and developed technology. We anticipate the purchase price allocation will be completed by the end of the second quarter 2018. The preliminary estimate of goodwill is $87 million. The results of operations of Earnest have been included in Navient's consolidated financial statements since the acquisition date and are reflected in Navient's Private Education Loans segment and its Earnest reporting unit. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the years ended December 31, 2017, 2016 and 2015, as the pro forma impact was deemed immaterial.

Acquisition of Duncan Solutions

In July 2017, Navient acquired a 100 percent controlling interest in Duncan Solutions for approximately $86 million in cash. Duncan Solutions is a leading transportation revenue management company serving municipalities and toll authorities, offering a range of technology-enabled products and services to supports its clients' parking and tolling operations. We have engaged an independent appraiser to assist in the valuation of the assets acquired and liabilities assumed including identifiable intangible assets, primarily customer relationships, the trade name and developed technology. The preliminary estimate of goodwill is $63 million. We anticipate the purchase price allocation will be completed by the end of the first quarter 2018. The results of operations of Duncan Solutions have been included in Navient's consolidated financial statements since the acquisition date and are reflected in Navient's Business Services segment and its Gila reporting unit. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the years ended December 31, 2017, 2016 and 2015, as the pro forma impact was deemed immaterial.

Acquisition of Xtend Healthcare

In October 2015, Navient acquired an 89 percent controlling interest in Xtend Healthcare for approximately $164 million, of which $102 million was allocated to goodwill. Xtend Healthcare is a health care revenue cycle management company that provides health insurance claims billing and account resolution, as well as patient billing and customer service. The results of operations of Xtend Healthcare have been included in Navient's consolidated financial statements since the acquisition date and are reflected in Navient's Business Services segment and its Xtend reporting unit. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the year ended December 31, 2015, as the pro forma impact was deemed immaterial.

Identifiable intangible assets at the acquisition date included definite life intangible assets with an estimated aggregate fair value of approximately $65 million primarily including customer relationships, developed technology, and the Xtend Healthcare trade name. These intangible assets will be amortized over a period of 10 to 15 years based on the estimated economic benefit derived from each of the underlying assets.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

Acquisition of Gila

In February 2015, Navient acquired a 98 percent majority controlling interest in Gila for approximately $185 million, of which $97 million was allocated to goodwill. Gila is an asset recovery and business processing firm. The firm provides services to state governments, agencies, court systems and municipalities. The results of operations of Gila have been included in Navient's consolidated financial statements since the acquisition date and are reflected in Navient's Business Services segment and its Gila reporting unit. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the year ended December 31, 2015, as the pro forma impact was deemed immaterial.

Identifiable intangible assets at the acquisition date included the Gila trade name, initially classified as an indefinite life intangible asset, with an aggregate fair value of approximately $13 million as of the acquisition date. Definite life intangible assets with an estimated aggregate fair value of approximately $71 million as of the acquisition date consist primarily of customer relationships. These intangible assets will be amortized over 7 to 16 years depending on the estimated economic benefit derived from each of the underlying assets.

Goodwill

All acquisitions must be assigned to a reporting unit or units. A reporting unit is the same as, or one level below, an operating segment. We have four reportable segments: FFELP Loans, Private Education Loans, Business Services and Other. The following table summarizes our goodwill, accumulated impairments and net goodwill for our reporting units and reportable segments.

	As of December 31, 2017			As of December 31, 2016		
(Dollars in millions)	Gross	Accumulated Impairments and Other Adjustments[1]	Net	Gross	Accumulated Impairments and Other Adjustments[1]	Net
FFELP Loans reportable segment	$194	$ (4)	$190	$194	$ (4)	$190
Private Education Loans reportable segment:						
Private Education Loans	147	(41)	106	147	(41)	106
Earnest	87	—	87	—	—	—
Total Private Education Loans reportable segment[1]	234	(41)	193	147	(41)	106
Business Services reportable segment:						
Servicing	50	—	50	50	—	50
Asset Recovery — Contingency	136	(136)	—	136	(136)	—
Asset Recovery — Gila	160	—	160	97	—	97
Asset Recovery — Xtend Healthcare	108	—	108	102	—	102
Total Business Services reportable segment	454	(136)	318	385	(136)	249
Total	$882	$(181)	$701	$726	$(181)	$545

(1) In conjunction with our Separation from SLM BankCo in 2014, we removed $41 million of goodwill from our balance sheet as required under ASC 350, "Intangibles — Goodwill and Other." This goodwill was allocated to the consumer banking business retained by SLM BankCo based on relative fair value.

Annual Goodwill Impairment Testing — October 1, 2017

We perform our goodwill impairment testing annually in the fourth quarter as of October 1. As part of the 2017 annual impairment testing associated with our FFELP Loans, Private Education Loans and Servicing

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

reporting units, we assessed relevant qualitative factors to determine whether it is "more-likely-than-not" that the fair value of an individual reporting unit is less than its carrying value. We considered the amount of excess fair values over the carrying values of individual reporting units as of October 1, 2016 when we last performed a Step 1 goodwill impairment test and engaged an appraisal firm to estimate the fair values of these reporting units. The fair values of these reporting units at October 1, 2016 were substantially in excess of their carrying amounts. In addition, the cash flows for our FFELP Loans, Private Education Loans and Servicing reporting units are very predictable and the outlook and associated cash flow projections of these reporting units have not changed significantly since our 2016 assessment. No goodwill was deemed impaired for the reporting units after assessing these relevant qualitative factors.

We also assessed relevant qualitative factors associated with our Gila reporting unit. We considered the acquisition value, 2017 earnings, 2018 expectations, current customer base, revenue backlog, and short and long-term outlook. Goodwill was not deemed to be impaired for the reporting unit after assessing these relevant qualitative factors.

We also considered that our market capitalization was greater than our book equity, the current regulatory and legislative environment, the current economic environment, our 2017 earnings, 2018 expected earnings and analyst expectations regarding our stock price. We viewed these factors as favorable.

Regarding our Xtend reporting unit, we retained a third-party appraisal firm to estimate the fair value of the reporting unit as required to perform a Step 1 impairment test of goodwill. We determined a Step 1 impairment test was warranted due to revenue performance since the acquisition being below expectations. The income approach and the market approach were the primary approaches used to estimate the fair value of the reporting unit. Goodwill was not deemed impaired for the Xtend reporting unit.

The income approach measures the value of the reporting unit's future economic benefit determined by its discounted cash flows derived from our projections plus an assumed terminal growth rate adjusted for what we believe a market participant would assume in an acquisition. These projections are generally five to seven-year projections that reflect the anticipated cash flow fluctuations of the reporting unit.

Under our guidance, the third-party appraisal firm developed the discount rate for the reporting unit incorporating such factors as the risk-free rate, equity risk premium, industry risk premium, a measure of volatility (Beta) and a company-specific risk premium, to adjust for volatility and uncertainty in the economy and to capture specific risk related to the reporting unit. We considered whether an asset sale or an equity sale would be the most likely sale structure for the reporting unit and valued the reporting unit based on the more likely hypothetical scenario, an asset sale. The discount rate reflects market-based estimates of capital costs and is adjusted for our assessment of a market participant's view with respect to execution, source concentration and other risks associated with the projected cash flows of the reporting unit. We reviewed and approved the discount rate of 13.5 percent provided by the third-party appraiser including the factors incorporated to develop the discount rate.

We and the third-party appraisal firm also considered a market approach to value the reporting unit. Market-based revenue and EBITDA multiples for comparable publicly traded companies and similar transactions were applied to the reporting unit's revenue and EBITDA indicators to derive a value for the reporting unit.

At October 1, 2017, the carrying value of equity of the Xtend reporting unit was $176 million and the percentage of the estimated fair value in excess of the carrying value was 19 percent.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

We acknowledge that a downturn in the economy coupled with liquidity constraints, and changes in legislation and the regulatory environment could adversely affect the operating results of our reporting units. If the forecasted performance of our reporting units is not achieved, or if our stock price declines resulting in deterioration in our total market capitalization, the fair value of one or more of the reporting units could be significantly reduced, and we may be required to record a charge, which could be material, for an impairment of goodwill associated with these reporting units.

Interim Goodwill Impairment Testing — December 31, 2017

We performed interim goodwill impairment testing as of December 31, 2017 for the Gila reporting unit as the December 2017 notification of the loss of a significant toll contract effective January 1, 2019 was deemed a triggering event warranting an impairment assessment. We retained a third-party appraisal firm to estimate the fair value of the reporting unit as required to perform a Step 1 impairment test. Goodwill was not deemed impaired for the Gila reporting unit.

The income approach was the primary approach used to fair value the reporting unit. We provided the appraisal firm projections that reflect the anticipated cash flow fluctuations of the reporting unit. These projections incorporated the anticipated cash flow benefit of a lower corporate federal statutory tax rate due to the 2017 "Tax Cuts and Jobs Act."

Under our guidance, the appraisal firm developed a discount rate for the reporting unit incorporating such factors as the risk-free rate, equity risk premium, industry risk premium, a measure of volatility (Beta) and a company-specific risk premium, to adjust for volatility and uncertainty in the economy and to capture specific risk related to the reporting unit. We considered whether an asset sale or an equity sale would be the most likely sale structure for the reporting unit and valued the reporting unit based on the more likely hypothetical scenario, an asset sale. The discount rate reflects market-based estimates of capital costs and is adjusted for our assessment of a market participant's view with respect to execution, source concentration and other risks associated with the projected cash flows of the reporting unit. We reviewed and approved the discount rate of 15.0 percent provided by the third-party appraiser including the factors incorporated to develop the discount rate.

We and the third-party appraisal firm also considered a market approach to value the reporting unit. Market-based revenue and EBITDA multiples for comparable publicly-traded companies and similar transactions were applied to the reporting unit's revenue and EBITDA indicators to derive a value for the reporting unit.

At December 31, 2017, the carrying value of equity of the Gila reporting unit was $245 million and the percentage of the estimated fair value in excess of the carrying value was 9 percent.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

Acquired Intangible Assets

Acquired intangible assets include the following:

	As of December 31, 2017			As of December 31, 2016		
(Dollars in millions)	**Cost Basis(1)**	**Accumulated Impairment and Amortization(1)**	**Net**	**Cost Basis(1)**	**Accumulated Impairment and Amortization(1)**	**Net**
Customer, services and lending relationships	$292	$(234)	$ 58	$292	$(219)	$ 73
Favorable lease	1	—	1	1	—	1
Non-competes	2	(2)	—	2	(2)	—
Software and technology	104	(85)	19	101	(82)	19
Trade names and trademarks(2)	48	(18)	30	44	(13)	31
Total acquired intangible assets	$447	$(339)	$108	$440	$(316)	$124

(1) Accumulated impairment and amortization includes impairment amounts only if the acquired intangible asset has been deemed partially impaired. When an acquired intangible asset is considered fully impaired and no longer in use, the cost basis and any accumulated amortization related to the asset is written off.

(2) During 2016 we reclassified certain trade names from indefinite life to definite life intangible assets and began to amortize these assets over their expected benefit period.

We recorded amortization of acquired intangible assets from continuing operations totaling $23 million, $29 million and $12 million in 2017, 2016 and 2015, respectively. We will continue to amortize our intangible assets with definite useful lives over their remaining estimated useful lives. We estimate amortization expense associated with these intangible assets will be $20 million, $17 million, $14 million, $12 million and $39 million in 2018, 2019, 2020, 2021 and after 2021, respectively.

6. Borrowings

Borrowings consist of secured borrowings issued through our securitization program, borrowings through secured facilities, unsecured notes issued by us, and other interest-bearing liabilities related primarily to obligations to return cash collateral held. To match the interest rate and currency characteristics of our borrowings with the interest rate and currency characteristics of our assets, we enter into interest rate and foreign currency swaps with independent parties. Under these agreements, we make periodic payments, generally indexed to the related asset rates or rates which are highly correlated to the asset rates, in exchange for periodic payments which generally match our interest obligations on fixed or variable rate notes (see "Note 7 — Derivative Financial Instruments"). Payments and receipts on our interest rate and currency swaps are not reflected in the following tables.

6. Borrowings (Continued)

The following table summarizes our borrowings.

(Dollars in millions)	December 31, 2017 Short Term	December 31, 2017 Long Term	December 31, 2017 Total	December 31, 2016 Short Term	December 31, 2016 Long Term	December 31, 2016 Total
Unsecured borrowings:						
Senior unsecured debt[1]	$1,306	$ 12,624	$ 13,930	$ 717	$ 13,029	$ 13,746
Total unsecured borrowings	1,306	12,624	13,930	717	13,029	13,746
Secured borrowings:						
FFELP Loan securitizations	—	71,208	71,208	—	73,522	73,522
Private Education Loan securitizations[2]	686	12,646	13,332	548	14,125	14,673
FFELP Loan — other facilities	1,536	6,830	8,366	—	12,443	12,443
Private Education Loan — other facilities	684	1,710	2,394	464	—	464
Other[3]	538	—	538	606	—	606
Total secured borrowings	3,444	92,394	95,838	1,618	100,090	101,708
Total before hedge accounting adjustments	4,750	105,018	109,768	2,335	113,119	115,454
Hedge accounting adjustments	21	(6)	15	(1)	(751)	(752)
Total	$4,771	$105,012	$109,783	$2,334	$112,368	$114,702

(1) Includes principal amount of $1.3 billion and $719 million of short-term debt as of December 31, 2017 and 2016, respectively. Includes principal amount of $12.7 billion and $13.1 billion of long-term debt as of December 31, 2017 and 2016, respectively.

(2) Includes $686 million and $548 of short-term debt related to the Private Education Loan asset-backed securitization repurchase facilities ("Repurchase Facilities") as of December 31, 2017 and 2016, respectively. Includes $1.3 billion and $475 million of long-term debt related to the Repurchase Facilities as of December 31, 2017 and 2016, respectively.

(3) "Other" primarily includes the obligation to return cash collateral held related to derivative exposures, which includes $0 million and $193 million of securities re-pledged subject to an overnight repurchase transaction as of December 31, 2017 and 2016, respectively.

6. Borrowings (Continued)

Short-term Borrowings

Short-term borrowings have a remaining term to maturity of one year or less. The following tables summarize outstanding short-term borrowings (secured and unsecured), the weighted average interest rates at the end of each period, and the related average balances and weighted average interest rates during the periods.

	December 31, 2017		Year Ended December 31, 2017	
(Dollars in millions)	Ending Balance	Weighted Average Interest Rate	Average Balance	Weighted Average Interest Rate
Private Education Loan securitizations[1]	$ 686	4.65%	$ 706	4.32%
FFELP Loan — other facilities	1,536	2.11	261	1.26
Private Education Loan — other facilities	684	2.92	572	2.42
Senior unsecured debt	1,327	8.06	1,197	6.80
Other interest-bearing liabilities	538	1.33	458	1.27
Total short-term borrowings	$4,771	4.16%	$3,194	4.22%
Maximum outstanding at any month end	$4,771			

	December 31, 2016		Year Ended December 31, 2016	
(Dollars in millions)	Ending Balance	Weighted Average Interest Rate	Average Balance	Weighted Average Interest Rate
Private Education Loan securitizations[1]	$ 548	3.72%	$ 42	3.81%
FFELP Loan — other facilities	—	—	—	—
Private Education Loan — other facilities	464	2.02	389	1.83
Senior unsecured debt	716	4.22	1,032	5.01
Other interest-bearing liabilities	606	.96	629	.48
Total short-term borrowings	$2,334	2.82%	$2,092	3.03%
Maximum outstanding at any month end	$2,637			

(1) Relates to Repurchase Facilities.

6. Borrowings (Continued)

Long-term Borrowings

The following tables summarize outstanding long-term borrowings, the weighted average interest rates at the end of the periods, and the related average balances during the periods.

(Dollars in millions)	December 31, 2017 Ending Balance[1]	December 31, 2017 Weighted Average Interest Rate[2]	Year Ended December 31, 2017 Average Balance
Floating rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2018-2083	$ 83,209	2.31%	$ 86,186
Non-U.S. dollar-denominated:			
Interest bearing, due 2023-2041	6,423	.37	7,355
Total floating rate notes	89,632	2.17	93,541
Fixed rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2019-2058	15,114	5.60	15,266
Non-U.S.-dollar denominated:			
Interest bearing, due 2034-2035	266	2.72	281
Total fixed rate notes	15,380	5.55	15,547
Total long-term borrowings	$105,012	2.67%	$109,088

(Dollars in millions)	December 31, 2016 Ending Balance[1]	December 31, 2016 Weighted Average Interest Rate[2]	Year Ended December 31, 2016 Average Balance
Floating rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2017-2083	$ 88,575	1.65%	$ 93,881
Non-U.S. dollar-denominated:			
Interest bearing, due 2023-2041	7,265	.28	8,761
Total floating rate notes	95,840	1.54	102,642
Fixed rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2018-2058	16,271	5.65	16,050
Non-U.S.-dollar denominated:			
Interest bearing, due 2034-2035	257	2.82	281
Total fixed rate notes	16,528	5.60	16,331
Total long-term borrowings	$112,368	2.14%	$118,973

(1) Ending balance is expressed in U.S. dollars using the spot currency exchange rate. Includes fair value adjustments under hedge accounting for notes designated as the hedged item in a fair value hedge.

(2) Weighted average interest rate is stated rate relative to currency denomination of debt.

6. Borrowings (Continued)

As of December 31, 2017, the expected maturities of our long-term borrowings are shown in the following table.

(Dollars in millions)	Expected Maturity Senior Unsecured Debt	Secured Borrowings[1]	Total[2]
Year of Maturity			
2018	$ —	$11,810	$ 11,810
2019	2,369	10,276	12,645
2020	2,041	9,076	11,117
2021	1,428	7,477	8,905
2022	1,731	6,326	8,057
2023-2039	5,055	47,429	52,484
	12,624	92,394	105,018
Hedge accounting adjustments	240	(246)	(6)
Total	$12,864	$92,148	$105,012

(1) We view our securitization trust debt as long-term based on the contractual maturity dates which range from 2018 to 2083. However, we have projected the expected principal paydowns based on our current estimates regarding the securitized loans' prepayment speeds for purposes of this disclosure to better reflect how we expect this debt to be paid down over time. The projected principal paydowns in year 2018 include $11.8 billion related to the securitization trust debt.

(2) The aggregate principal amount of debt that matures in each period is $11.9 billion in 2018, $12.7 billion in 2019, $11.2 billion in 2020, $9.0 billion in 2021, $8.1 billion in 2022 and $53.0 billion in 2023-2039.

6. Borrowings (Continued)

Variable Interest Entities

We consolidate the following financing VIEs as of December 31, 2017 and 2016, as we are the primary beneficiary. As a result, these VIEs are accounted for as secured borrowings.

	December 31, 2017						
	Debt Outstanding			Carrying Amount of Assets Securing Debt Outstanding			
(Dollars in millions)	Short Term	Long Term	Total	Loans	Cash	Other Assets, Net	Total
Secured Borrowings — VIEs:							
FFELP Loan securitizations	$ —	$71,208	$71,208	$72,145	$2,335	$1,078	$ 75,558
Private Education Loan securitizations[1]	686	12,646	13,332	17,739	484	237	18,460
FFELP Loan — other facilities	1,536	3,999	5,535	5,565	204	156	5,925
Private Education Loan — other facilities	684	1,710	2,394	3,147	68	31	3,246
Total before hedge accounting adjustments	2,906	89,563	92,469	98,596	3,091	1,502	103,189
Hedge accounting adjustments	—	(246)	(246)	—	—	(342)	(342)
Total	$2,906	$89,317	$92,223	$98,596	$3,091	$1,160	$102,847

	December 31, 2016						
	Debt Outstanding			Carrying Amount of Assets Securing Debt Outstanding			
(Dollars in millions)	Short Term	Long Term	Total	Loans	Cash	Other Assets, Net	Total
Secured Borrowings — VIEs:							
FFELP Loan securitizations	$ —	$73,522	$73,522	$ 74,197	$2,676	$ 778	$ 77,651
Private Education Loan securitizations[1]	548	14,125	14,673	19,815	455	260	20,530
FFELP Loan — other facilities	—	9,046	9,046	9,232	289	172	9,693
Private Education Loan — other facilities	464	—	464	685	10	14	709
Other	66	—	66	79	4	—	83
Total before hedge accounting adjustments	1,078	96,693	97,771	104,008	3,434	1,224	108,666
Hedge accounting adjustments	—	(1,201)	(1,201)	—	—	(1,235)	(1,235)
Total	$1,078	$95,492	$96,570	$104,008	$3,434	$ (11)	$107,431

[1] Includes $686 million of short-term debt, $1.3 billion of long-term debt and $96 million of restricted cash related to the Repurchase Facilities as of December 31, 2017. Includes $548 million of short-term debt, $475 million of long-term debt and $49 million of restricted cash related to the Repurchase Facilities as of December 31, 2016.

6. Borrowings (Continued)

Securitizations

Private Education Loan ABS Repurchase Facilities

Since the fourth quarter of 2015, we have closed on $2.5 billion of Private Education Loan ABS Repurchase Facilities. These repurchase facilities are collateralized by Residual Interests in previously issued Private Education Loan ABS trusts. The lenders also have unsecured recourse to Navient Corporation as guarantor for any shortfall in amounts payable. Because these facilities are secured by the Residual Interests in previous securitizations, we show the debt and assets as part of Private Education Loan securitizations in the Secured Borrowings table above.

FFELP Loans — Other Secured Borrowing Facilities

We have various secured borrowing facilities that we use to finance our FFELP Loans. Liquidity is available under these secured credit facilities to the extent we have eligible collateral and available capacity. The maximum borrowing capacity under these facilities will vary and is subject to each agreement's borrowing conditions. These include but are not limited to the facility's size, current usage and the availability and fair value of qualifying unencumbered FFELP Loan collateral. Our borrowings under these facilities are non-recourse. The maturity dates on these facilities range from November 2018 to January 2021. The interest rate on certain facilities can increase under certain circumstances. The facilities are subject to termination under certain circumstances. As of December 31, 2017, there was approximately $8.4 billion outstanding under these facilities, with approximately $9.4 billion of assets securing these facilities. As of December 31, 2017, the maximum unused capacity under these facilities was $2.4 billion. As of December 31, 2017, we had $0.7 billion of unencumbered FFELP Loans.

Private Education Loans — Other Secured Borrowing Facilities

We have various secured borrowing facilities that we use to finance our Private Education Loans. Liquidity is available under these secured credit facilities to the extent we have eligible collateral and available capacity. The maximum borrowing capacity under these facilities will vary and is subject to each agreement's borrowing conditions. These include but are not limited to the facility's size, current usage and the availability and fair value of qualifying unencumbered Private Education Loan collateral. Our borrowings under these facilities are non-recourse. The maturity dates on these facilities range from June 2018 to June 2020. The interest rate on certain facilities can increase under certain circumstances. The facilities are subject to termination under certain circumstances. As of December 31, 2017, there was approximately $2.4 billion outstanding under these facilities, with approximately $3.1 billion of assets securing these facilities. As of December 31, 2017, the maximum unused capacity under these facilities was $925 million. As of December 31, 2017, we had $2.5 billion of unencumbered Private Education Loans.

The Private Education Loan ABCP facilities' borrowing capacity includes a new $750 million revolving credit facility that closed in fourth-quarter 2017 to warehouse Private Education Refinance Loan originations. This facility matures in October 2018. At December 31, 2017, the available capacity under this facility was $328 million.

Other Funding Sources

Senior Unsecured Debt

We issued $1.6 billion, $1.3 billion and $500 million of unsecured debt in 2017, 2016 and 2015, respectively.

6. Borrowings (Continued)

Debt Repurchases

The following table summarizes activity related to our senior unsecured debt and ABS repurchases. "Gains (losses) on debt repurchases" is shown net of hedging-related gains and losses.

	Years Ended December 31,		
(Dollars in millions)	2017	2016	2015
Debt principal repurchased	$513	$1,467	$1,744
Gains (losses) on debt repurchases	(3)	1	21

7. Derivative Financial Instruments

Risk Management Strategy

We maintain an overall interest rate risk management strategy that incorporates the use of derivative instruments to minimize the economic effect of interest rate changes. Our goal is to manage interest rate sensitivity by modifying the repricing frequency and underlying index characteristics of certain balance sheet assets and liabilities so the net interest margin is not, on a material basis, adversely affected by movements in interest rates. We do not use derivative instruments to hedge credit risk. As a result of interest rate fluctuations, hedged assets and liabilities will appreciate or depreciate in market value. Income or loss on the derivative instruments that are linked to the hedged assets and liabilities will generally offset the effect of this unrealized appreciation or depreciation for the period the item is being hedged. We view this strategy as a prudent management of interest rate sensitivity. In addition, we utilize derivative contracts to minimize the economic impact of changes in foreign currency exchange rates on certain debt obligations that are denominated in foreign currencies. As foreign currency exchange rates fluctuate, these liabilities will appreciate and depreciate in value. These fluctuations, to the extent the hedge relationship is effective, are offset by changes in the value of the cross-currency interest rate swaps executed to hedge these instruments. Management believes certain derivative transactions entered into as hedges, primarily Floor Income Contracts and basis swaps, are economically effective; however, those transactions generally do not qualify for hedge accounting under GAAP (as discussed below) and thus may adversely impact earnings.

Although we use derivatives to minimize the risk of interest rate and foreign currency changes, the use of derivatives does expose us to both market and credit risk. Market risk is the chance of financial loss resulting from changes in interest rates, foreign exchange rates and market liquidity. Credit risk is the risk that a counterparty will not perform its obligations under a contract and it is limited to the loss of the fair value gain in a derivative that the counterparty owes us. When the fair value of a derivative contract is negative, we owe the counterparty and, therefore, have no credit risk exposure to the counterparty; however, the counterparty has exposure to us. We minimize the credit risk in derivative instruments by entering into transactions with highly rated counterparties that are reviewed regularly by our Credit Department. We also maintain a policy of requiring that all derivative contracts be governed by an International Swaps and Derivative Association Master Agreement. Depending on the nature of the derivative transaction, bilateral collateral arrangements related to Navient Corporation contracts generally are required as well. When we have more than one outstanding derivative transaction with the counterparty, and there exists legally enforceable netting provisions with the counterparty (i.e., a legal right to offset receivable and payable derivative contracts), the "net" mark-to-market exposure, less collateral the counterparty has posted to us, represents exposure with the counterparty. When there is a net negative exposure, we consider our exposure to the counterparty to be zero. At December 31, 2017 and 2016, we had a net positive exposure (derivative gain positions to us less collateral which has been posted by counterparties to us) related to Navient Corporation derivatives of $24 million and $110 million, respectively.

7. Derivative Financial Instruments (Continued)

Our on-balance sheet securitization trusts have $6.7 billion of Euro and British Pound Sterling denominated bonds outstanding as of December 31, 2017. To convert these non-U.S. dollar denominated bonds into U.S. dollar liabilities, the trusts have entered into foreign-currency swaps with highly-rated counterparties. In addition, the trusts have entered into $7.8 billion notional of interest rates swaps which are primarily used to convert Prime received on securitized education loans to LIBOR paid on the bonds. Our securitization trusts with swaps have ISDA documentation with protections against counterparty risk. The collateral calculations contemplated in the ISDA documentation of our securitization trusts require collateral based on the fair value of the derivative which may be adjusted for additional collateral based on rating agency criteria requirements considered within the collateral agreement. The trusts are not required to post collateral to the counterparties. At December 31, 2017 and 2016, the net positive exposure on swaps in securitization trusts was $64 million and $9 million, respectively.

Accounting for Derivative Instruments

Derivative instruments that are used as part of our interest rate and foreign currency risk management strategy include interest rate swaps, basis swaps, cross-currency interest rate swaps, and interest rate floor contracts with indices that relate to the pricing of specific balance sheet assets and liabilities. The accounting for derivative instruments requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded on the balance sheet as either an asset or liability measured at its fair value. As more fully described below, if certain criteria are met, derivative instruments are classified and accounted for by us as either fair value or cash flow hedges. If these criteria are not met, the derivative financial instruments are accounted for as trading.

Fair Value Hedges

Fair value hedges are generally used by us to hedge the exposure to changes in fair value of a recognized fixed rate asset or liability. We enter into interest rate swaps to economically convert fixed rate assets into variable rate assets and fixed rate debt into variable rate debt. We also enter into cross-currency interest rate swaps to economically convert foreign currency denominated fixed and floating debt to U.S. dollar denominated variable debt. For fair value hedges, we generally consider all components of the derivative's gain and/or loss when assessing hedge effectiveness and generally hedge changes in fair values due to interest rates or interest rates and foreign currency exchange rates.

Cash Flow Hedges

We use cash flow hedges to hedge the exposure to variability in cash flows for a forecasted debt issuance and for exposure to variability in cash flows of floating rate debt. This strategy is used primarily to minimize the exposure to volatility from future changes in interest rates. Gains and losses on the effective portion of a qualifying hedge are recorded in accumulated other comprehensive income and ineffectiveness is recorded immediately to earnings. In the case of a forecasted debt issuance, gains and losses are reclassified to earnings over the period which the stated hedged transaction affects earnings. If we determine it is not probable that the anticipated transaction will occur, gains and losses are reclassified immediately to earnings. In assessing hedge effectiveness, generally all components of each derivative's gains or losses are included in the assessment. We generally hedge exposure to changes in cash flows due to changes in interest rates or total changes in cash flow.

Trading Activities

When derivative instruments do not qualify as hedges, they are accounted for as trading instruments where all changes in fair value are recorded through earnings. We sell interest rate floors (Floor Income Contracts) to

7. Derivative Financial Instruments (Continued)

hedge the embedded Floor Income options in education loan assets. The Floor Income Contracts are written options which have a more stringent hedge effectiveness hurdle to meet. Specifically, our Floor Income Contracts do not qualify for hedge accounting treatment because the pay down of principal of the education loans underlying the Floor Income embedded in those education loans does not exactly match the change in the notional amount of our written Floor Income Contracts. Additionally, the term, the interest rate index and the interest rate index reset frequency of the Floor Income Contracts can be different from that of the education loans. Therefore, Floor Income Contracts do not qualify for hedge accounting treatment, and are recorded as trading instruments. Regardless of the accounting treatment, we consider these contracts to be economic hedges for risk management purposes. We use this strategy to minimize our exposure to changes in interest rates.

We use basis swaps to minimize earnings variability caused by having different reset characteristics on our interest-earning assets and interest-bearing liabilities. The specific terms and notional amounts of the swaps are determined based on a review of our asset/liability structure, our assessment of future interest rate relationships, and on other factors such as short-term strategic initiatives. Hedge accounting requires that when using basis swaps, the change in the cash flows of the hedge effectively offset both the change in the cash flows of the asset and the change in the cash flows of the liability. Our basis swaps hedge variable interest rate risk; however, they generally do not meet this effectiveness criterion because the index of the swap does not exactly match the index of the hedged assets. Additionally, some of our FFELP Loans can earn at either a variable or a fixed interest rate depending on market interest rates and, therefore, swaps economically hedging these FFELP Loans do not meet the criteria for hedge accounting treatment. As a result, these swaps are recorded at fair value with changes in fair value reflected currently in the statement of income.

7. Derivative Financial Instruments (Continued)

Summary of Derivative Financial Statement Impact

The following tables summarize the fair values and notional amounts or number of contracts of all derivative instruments at December 31, 2017 and 2016, and their impact on other comprehensive income and earnings for 2017, 2016 and 2015.

Impact of Derivatives on Consolidated Balance Sheet

		Cash Flow		Fair Value		Trading		Total	
(Dollars in millions)	Hedged Risk Exposure	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016
Fair Values[(1)]									
Derivative Assets:									
Interest rate swaps	Interest rate	$ 95	$ 78	$ 290	$ 465	$ 7	$ 22	$ 392	$ 565
Cross-currency interest rate swaps	Foreign currency and interest rate	—	—	88	—	—	—	88	—
Total derivative assets[(2)]		95	78	378	465	7	22	480	565
Derivative Liabilities:									
Interest rate swaps	Interest rate	(16)	(76)	(102)	(62)	(71)	(70)	(189)	(208)
Floor Income Contracts	Interest rate	—	—	—	—	(74)	(184)	(74)	(184)
Cross-currency interest rate swaps	Foreign currency and interest rate	—	—	(410)	(1,243)	(44)	(53)	(454)	(1,296)
Other[(3)]	Interest rate	—	—	—	—	(18)	(13)	(18)	(13)
Total derivative liabilities[(2)]		(16)	(76)	(512)	(1,305)	(207)	(320)	(735)	(1,701)
Net total derivatives		$ 79	$ 2	$(134)	$ (840)	$(200)	$(298)	$(255)	$(1,136)

(1) Fair values reported are exclusive of collateral held and pledged and accrued interest. Assets and liabilities are presented without consideration of master netting agreements. Derivatives are carried on the balance sheet based on net position by counterparty under master netting agreements, and classified in other assets or other liabilities depending on whether in a net positive or negative position.

(2) The following table reconciles gross positions with the impact of master netting agreements to the balance sheet classification:

	Other Assets		Other Liabilities	
(Dollar in millions)	December 31, 2017	December 31, 2016	December 31, 2017	December 31, 2016
Gross position	$ 480	$ 565	$(735)	$(1,701)
Impact of master netting agreements	(42)	(31)	42	31
Derivative values with impact of master netting agreements (as carried on balance sheet)	438	534	(693)	(1,670)
Cash collateral (held) pledged	(536)	(345)	235	319
Net position, as presented on the balance sheet	$ (98)	$ 189	$(458)	$(1,351)

(3) "Other" includes derivatives related to our Total Return Swap Facility.

7. Derivative Financial Instruments (Continued)

The above fair values include adjustments for counterparty credit risk for both when we are exposed to the counterparty, net of collateral postings, and when the counterparty is exposed to us, net of collateral postings. The net adjustments decreased certain asset positions at December 31, 2017 and 2016 by $6 million and $0 million, respectively. In addition, the above fair values reflect adjustments for illiquid derivatives as indicated by a wide bid/ask spread in the interest rate indices to which the derivatives are indexed. These adjustments decreased certain asset positions at December 31, 2017 and 2016 by $30 million and $31 million, respectively.

	Cash Flow		Fair Value		Trading		Total	
(Dollars in billions)	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016
Notional Values:								
Interest rate swaps	$24.1	$15.2	$12.4	$11.8	$72.0	$23.8	$108.5	$50.8
Floor Income Contracts	—	—	—	—	21.9	18.5	21.9	18.5
Cross-currency interest rate swaps	—	—	6.7	8.5	.3	.3	7.0	8.8
Other[1]	—	—	—	—	.5	2.6	.5	2.6
Total derivatives	$24.1	$15.2	$19.1	$20.3	$94.7	$45.2	$137.9	$80.7

(1) "Other" includes derivatives related to our Total Return Swap Facility.

7. Derivative Financial Instruments (Continued)

Impact of Derivatives on Consolidated Statements of Income

	Years Ended December 31,											
	Unrealized Gain (Loss) on Derivatives[1][2]			Realized Gain (Loss) on Derivatives[3]			Unrealized Gain (Loss) on Hedged Item[1]			Total Gain (Loss)		
(Dollars in millions)	2017	2016	2015	2017	2016	2015	2017	2016	2015	2017	2016	2015
Fair Value Hedges:												
Interest rate swaps	$(214)	$(288)	$(115)	$ 175	$ 259	$ 345	$ 193	$302	$ 140	$ 154	$273	$370
Cross-currency interest rate swaps	921	(319)	(794)	(118)	(86)	(7)	(954)	350	921	(151)	(55)	120
Total fair value derivatives	707	(607)	(909)	57	173	338	(761)	652	1,061	3	218	490
Cash Flow Hedges:												
Interest rate swaps	—	—	—	(49)	(50)	—	—	—	—	(49)	(50)	—
Total cash flow derivatives	—	—	—	(49)	(50)	—	—	—	—	(49)	(50)	—
Trading:												
Interest rate swaps	(16)	(13)	61	24	42	42	—	—	—	8	29	103
Floor Income Contracts	150	297	557	(69)	(246)	(650)	—	—	—	81	51	(93)
Cross-currency interest rate swaps	8	9	2	(6)	(4)	(4)	—	—	—	2	5	(2)
Other	(5)	(10)	9	(10)	(3)	(3)	—	—	—	(15)	(13)	6
Total trading derivatives	137	283	629	(61)	(211)	(615)	—	—	—	76	72	14
Total	844	(324)	(280)	(53)	(88)	(277)	(761)	652	1,061	30	240	504
Less: realized gains (losses) recorded in interest expense	—	—	—	8	123	338	—	—	—	8	123	338
Gains (losses) on derivative and hedging activities, net	$ 844	$(324)	$(280)	$ (61)	$(211)	$(615)	$(761)	$652	$1,061	$ 22	$117	$166

(1) Recorded in "Gains (losses) on derivative and hedging activities, net" in the consolidated statements of income.

(2) Represents ineffectiveness related to cash flow hedges.

(3) For fair value and cash flow hedges, recorded in interest expense. For trading derivatives, recorded in "Gains (losses) on derivative and hedging activities, net."

7. Derivative Financial Instruments (Continued)

Impact of Derivatives on Consolidated Statements of Changes in Stockholders' Equity (net of tax)

(Dollars in millions)	Years Ended December 31, 2017	2016	2015
Total gains (losses) on cash flow hedges	$25	$26	$(59)
Realized (gains) losses recognized in interest expense[1][2][3]	30	31	(1)
Total change in stockholders' equity for unrealized gains (losses) on derivatives	$55	$57	$(60)

(1) Amounts included in "Realized gain (loss) on derivatives" in the "Impact of Derivatives on Consolidated Statements of Income" table above.

(2) Includes net settlement income/expense.

(3) We expect to reclassify $2 million of after-tax net losses from accumulated other comprehensive income to earnings during the next 12 months related to amortization of terminated hedge relationships.

Collateral

The following table details collateral held and pledged related to derivative exposure between us and our derivative counterparties.

(Dollars in millions)	December 31, 2017	December 31, 2016
Collateral held:		
Cash (obligation to return cash collateral is recorded in short-term borrowings)	$536	$ 345
Securities at fair value — corporate derivatives (not recorded in financial statements)[1]	—	193
Securities at fair value — on-balance sheet securitization derivatives (not recorded in financial statements)[2]	297	230
Total collateral held	$833	$ 768
Derivative asset at fair value including accrued interest	$618	$ 689
Collateral pledged to others:		
Cash (right to receive return of cash collateral is recorded in investments)	$235	$ 319
Total collateral pledged	$235	$ 319
Derivative liability at fair value including accrued interest and premium receivable	$659	$1,670

(1) The Company has the ability to sell or re-pledge securities it holds as collateral.

(2) The trusts do not have the ability to sell or re-pledge securities they hold as collateral.

Our corporate derivatives contain credit contingent features. At our current unsecured credit rating, we have fully collateralized our corporate derivative liability position (including accrued interest and net of premiums receivable) of $217 million with our counterparties. Downgrades in our unsecured credit rating would not result in any additional collateral requirements, except to increase the frequency of collateral calls. Trust related derivatives do not contain credit contingent features related to our or the trusts' credit ratings.

8. Other Assets

The following table provides the detail of our other assets.

(Dollars in millions)	December 31, 2017	December 31, 2016
Accrued interest receivable, net	$1,965	$1,663
Benefit and insurance-related investments	481	488
Derivatives at fair value	438	534
Income tax asset, net current and deferred	380	725
Fixed assets, net	156	160
Accounts receivable	108	95
Other loans, net	59	148
Other	438	380
Total	$4,025	$4,193

9. Stockholders' Equity

Common Stock

Our shareholders have authorized the issuance of 1.125 billion shares of common stock. The par value of Navient common stock is $0.01 per share. At December 31, 2017, 263 million shares were issued and outstanding and 28 million shares were unissued but encumbered for outstanding stock options, restricted stock units and dividend equivalent units for employee compensation and remaining authority for stock-based compensation plans. The stock-based compensation plans are described in "Note 11 — Stock-Based Compensation Plans and Arrangements."

Dividend and Share Repurchase Program

In 2017, 2016 and 2015, we paid full-year common stock dividends of $0.64 per share.

In 2015, we repurchased 56.0 million shares of common stock for $945 million. In 2016, we repurchased 59.6 million shares of common stock for $755 million, fully utilizing our share repurchase programs. In December 2016, our board of directors authorized a new $600 million share repurchase program effective January 1, 2017. In 2017, we repurchased 29.6 million shares of common stock for $440 million. Effective October 4, 2017, Navient temporarily suspended its remaining share repurchase program to allocate capital towards building book value. On January 24, 2018, we announced that we expect to restart our share repurchases in the second half of 2018. As of December 31, 2017, the remaining repurchase authority was $160 million.

9. Stockholders' Equity (Continued)

The following table summarizes our common share repurchases and issuances.

	Years Ended December 31,		
	2017	2016	2015
Common stock repurchased[(1)]	29,646,374	59,625,325	56,043,711
Average purchase price per share	$ 14.85	$ 12.68	$ 16.87
Shares repurchased related to employee stock-based compensation plans[(2)]	1,847,651	3,197,355	2,404,328
Average purchase price per share	$ 15.40	$ 13.21	$ 19.81
Common shares issued[(3)]	3,680,479	5,476,010	4,924,021

(1) Common shares purchased under our share repurchase program.

(2) Comprises shares withheld from stock option exercises and vesting of restricted stock for employees' tax withholding obligations and shares tendered by employees to satisfy option exercise costs.

(3) Common shares issued under our various compensation and benefit plans.

The closing price of our common stock on December 31, 2017 was $13.32.

10. Earnings (Loss) per Common Share

Basic earnings (loss) per common share ("EPS") are calculated using the weighted average number of shares of common stock outstanding during each period. A reconciliation of the numerators and denominators of the basic and diluted EPS calculations follows.

(In millions, except per share data)	Years Ended December 31,		
	2017	2016	2015
Numerator:			
Net income attributable to Navient Corporation	$ 292	$ 681	$ 984
Denominator:			
Weighted average shares used to compute basic EPS	275	316	376
Effect of dilutive securities:			
Dilutive effect of stock options, restricted stock, restricted stock units, performance stock units and Employee Stock Purchase Plan ("ESPP")[(1)]	6	6	6
Dilutive potential common shares[(2)]	6	6	6
Weighted average shares used to compute diluted EPS	281	322	382
Basic earnings per common share attributable to Navient Corporation	$1.06	$2.15	$2.62
Diluted earnings per common share attributable to Navient Corporation	$1.04	$2.12	$2.58

(1) Includes the potential dilutive effect of additional common shares that are issuable upon exercise of outstanding stock options, restricted stock, restricted stock units, performance stock units and the outstanding commitment to issue shares under the ESPP, determined by the treasury stock method.

(2) For the years ended December 31, 2017, 2016 and 2015, stock options covering approximately 5 million, 4 million and 6 million shares, respectively, were outstanding but not included in the computation of diluted earnings per share because they were anti-dilutive.

11. Stock-Based Compensation Plans and Arrangements

We have one active stock-based incentive plan that provides for grants of equity awards to our employees and non-employee directors in various forms including stock options, restricted stock awards, restricted stock units and performance stock units. We also maintain an ESPP. Shares issued under these plans may be either shares reacquired by us or shares that are authorized but unissued. Our Navient Corporation 2014 Omnibus Incentive Plan became effective on April 7, 2014, and 55 million shares are authorized to be issued from this plan as of December 31, 2017. Our Navient Corporation ESPP became effective on May 1, 2014, and 1 million shares are authorized to be issued from this plan as of December 31, 2017.

For most awards, expense generally is recognized ratably over the vesting period net of estimated forfeitures, unless the employee meets certain retirement eligibility criteria. For employee awards that meet retirement eligibility criteria, we record the expense generally upon grant and for employees that become retirement eligible during the vesting period, we recognize expense from the grant date to the date on which the employee becomes retirement eligible. The total stock-based compensation cost recognized in 2017, 2016 and 2015 was $35 million, $26 million and $29 million, respectively. As of December 31, 2017, there was $17 million of total unrecognized compensation expense related to unvested stock awards, which is expected to be recognized over a weighted average period of 1.4 years.

Stock Options

The exercise price of stock options equals the fair market value of our common stock on the date of grant. The maximum contractual term for stock options is 5 years for grants made since 2012, and 10 years for grants made prior to 2012. Most stock options are time-vested, with one-third vesting per year beginning with the first anniversary of the grant date.

The fair values of the options granted in the years ended December 31, 2017, 2016 and 2015 were estimated as of the grant date using a Black-Scholes option pricing model with the following weighted average assumptions:

	Years Ended December 31,		
	2017	2016	2015
Expected life of the option	3.0 years	3.0 years	2.9 years
Expected volatility	34%	30%	22%
Risk-free interest rate	1.44%	.90%	.95%
Expected dividend rate	4.13%	6.97%	2.99%
Weighted average fair value of options granted	$ 2.69	$ 1.01	$ 2.22

The expected life is based in general on observed historical exercise patterns of SLM Corporation's employees pre-Spin-Off (excluding employees who transitioned to SLM Bank) and Navient's employees post-Spin-Off. The expected volatility is based in general on implied volatility from publicly-traded options on our stock at the grant date and historical volatility of both our stock and our peer group consistent with the expected life of the option. The risk-free interest rate is based on the U.S. Treasury spot rate at the grant date consistent with the expected life of the option. The dividend yield is based on the projected annual dividend payment per share based on the dividend amount at the grant date, divided by the stock price at the grant date.

11. Stock-Based Compensation Plans and Arrangements (Continued)

The following table summarizes Navient's stock option activity in 2017.

(Dollars in millions, except per share data)	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value[(1)]
Outstanding at December 31, 2016	14,912,004	$12.45		
Granted	1,308,167	15.48		
Exercised[(2)]	(1,497,807)	9.57		
Canceled	(538,638)	27.16		
Outstanding at December 31, 2017[(3)]	14,183,726	12.48	1.9 yrs.	$37
Exercisable at December 31, 2017	9,653,511	$12.34	1.3 yrs.	$26

(1) The aggregate intrinsic value represents the total intrinsic value (the aggregate difference between our closing stock price on December 31, 2017 and the exercise price of in-the-money options) that would have been received by the option holders if all in-the-money options had been exercised on December 31, 2017.

(2) The total intrinsic value of Navient stock options exercised was $9 million, $13 million and $19 million for 2017, 2016 and 2015, respectively.

(3) As of December 31, 2017, there was $1 million of unrecognized compensation cost related to stock options, which is expected to be recognized over a weighted average period of 1.8 years.

Restricted Stock

Restricted stock awards generally are granted to non-employee directors and generally vest upon the director's election to the board. Outstanding restricted stock is entitled to dividend equivalent units that vest subject to the same vesting requirements or lapse of transfer restrictions, as applicable, as the underlying restricted stock award. The fair value of restricted stock awards is based on our stock price at the grant date.

The following table summarizes Navient's restricted stock activity in 2017.

	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2016	—	$ —
Granted	59,124	15.39
Vested[(1)]	(50,727)	15.37
Canceled	(8,397)	15.48
Non-vested at December 31, 2017[(2)]	—	$ —

(1) The total fair value of Navient shares that vested was $1 million, $1 million and $1 million for 2017, 2016 and 2015, respectively.

(2) As of December 31, 2017, there was no unrecognized compensation cost related to restricted stock.

Restricted Stock Units and Performance Stock Units

Restricted stock units ("RSUs") and performance stock units ("PSUs") are equity awards granted to employees that entitle the holder to shares of our common stock when the award vests. RSUs generally are time-vested, with one-third vesting per year beginning with the first anniversary of the grant date, while PSUs vest

11. Stock-Based Compensation Plans and Arrangements (Continued)

based on achieving certain corporate performance goals over a three-year performance period. Outstanding RSUs and PSUs are entitled to dividend equivalent units that vest subject to the same vesting requirements or lapse of transfer restrictions, as applicable, as the underlying award. The fair value of RSUs and PSUs is based on our stock price at the grant date.

The following table summarizes Navient's RSU and PSU activity in 2017.

	Number of RSUs/ PSUs	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2016	4,372,376	$12.56
Granted	1,817,218	15.41
Vested and converted to common stock[1]	(1,724,568)	13.58
Canceled	(36,721)	12.95
Outstanding at December 31, 2017[2]	4,428,305	$13.33

(1) The total fair value of Navient RSUs and PSUs that vested and converted to common stock was $23 million, $30 million and $29 million for 2017, 2016 and 2015, respectively.

(2) As of December 31, 2017, there was $16 million of unrecognized compensation cost related to RSUs and PSUs, which is expected to be recognized over a weighted average period of 1.4 years.

12. Fair Value Measurements

We use estimates of fair value in applying various accounting standards for our financial statements. We categorize our fair value estimates based on a hierarchical framework associated with three levels of price transparency utilized in measuring financial instruments at fair value.

Education Loans

Our FFELP Loans and Private Education Loans are accounted for at cost or at the lower of cost or market if the loan is held-for-sale. Fair values were determined by modeling loan cash flows using stated terms of the assets and internally-developed assumptions to determine aggregate portfolio yield, net present value and average life.

FFELP Loans

The significant assumptions used to determine fair value of our FFELP Loans are prepayment speeds, default rates, cost of funds, capital levels and expected Repayment Borrower Benefits to be earned. In addition, the Floor Income component of our FFELP Loan portfolio is valued with option models using both observable market inputs and internally developed inputs. A number of significant inputs into the models are internally derived and not observable to market participants. While the resulting fair value can be validated against market transactions where we are a participant, these markets are not considered active. As such, these are level 3 valuations.

Private Education Loans

The significant assumptions used to determine fair value of our Private Education Loans are prepayment speeds, default rates, recovery rates, cost of funds and capital levels. A number of significant inputs into the

12. Fair Value Measurements (Continued)

models are internally derived and not observable to market participants nor can the resulting fair values be validated against market transactions. While the resulting fair value can be validated against market transactions where we are a participant, these markets are not considered active. As such, these are level 3 valuations.

Cash and Investments (Including "Restricted Cash and Investments")

Cash and cash equivalents are carried at cost. Carrying value approximates fair value. Investments classified as trading or available-for-sale are carried at fair value in the financial statements. Investments in mortgage-backed securities are valued using observable market prices. These securities are primarily collateralized by real estate properties and are guaranteed by either a government sponsored enterprise or the U.S. government. Other investments for which observable prices from active markets are not available were valued through standard bond pricing models using observable market yield curves adjusted for credit and liquidity spreads. These valuations are immaterial to the overall investment portfolio. The fair value of investments in commercial paper, asset-backed commercial paper, or demand deposits that have a remaining term of less than 90 days when purchased are estimated to equal their cost and, when needed, adjustments for liquidity and credit spreads are made depending on market conditions and counterparty credit risks. No additional adjustments were deemed necessary. These are level 2 valuations.

Borrowings

Borrowings are accounted for at cost in the financial statements except when denominated in a foreign currency or when designated as the hedged item in a fair value hedge relationship. When the hedged risk is the benchmark interest rate (which for us is LIBOR) and not full fair value, the cost basis is adjusted for changes in value due to benchmark interest rates only. Foreign currency-denominated borrowings are re-measured at current spot rates in the financial statements. The full fair value of all borrowings is disclosed. Fair value was determined through standard bond pricing models and option models (when applicable) using the stated terms of the borrowings, observable yield curves, foreign currency exchange rates, volatilities from active markets or from quotes from broker-dealers. Fair value adjustments for unsecured corporate debt are made based on indicative quotes from observable trades and spreads on credit default swaps specific to the Company. Fair value adjustments for secured borrowings are based on indicative quotes from broker-dealers. These adjustments for both secured and unsecured borrowings are material to the overall valuation of these items and, currently, are based on inputs from inactive markets. As such, these are level 3 valuations.

Derivative Financial Instruments

All derivatives are accounted for at fair value in the financial statements. The fair value of a majority of derivative financial instruments was determined by standard derivative pricing and option models using the stated terms of the contracts and observable market inputs. In some cases, we utilized internally developed inputs that are not observable in the market, and as such, classified these instruments as level 3 fair values. Complex structured derivatives or derivatives that trade in less liquid markets require significant estimates and judgment in determining fair value that cannot be corroborated with market transactions.

When determining the fair value of derivatives, we take into account counterparty credit risk for positions where there is exposure to the counterparty on a net basis by assessing exposure net of collateral held. The net exposures for each counterparty are adjusted based on market information available for the specific counterparty, including spreads from credit default swaps. When the counterparty has exposure to us under derivatives with us, we fully collateralize the exposure, minimizing the adjustment necessary to the derivative valuations for our credit risk. While trusts that contain derivatives are not required to post collateral, when the counterparty is

12. Fair Value Measurements (Continued)

exposed to the trust the credit quality and securitized nature of the trusts minimizes any adjustments for the counterparty's exposure to the trusts. The net credit risk adjustment (adjustments for our exposure to counterparties net of adjustments for the counterparties' exposure to us) decreased the valuations at December 31, 2017 by $6 million.

Inputs specific to each class of derivatives disclosed in the table below are as follows:

- Interest rate swaps — Derivatives are valued using standard derivative cash flow models. Derivatives that swap fixed interest payments for LIBOR interest payments (or vice versa) and derivatives swapping quarterly reset LIBOR for daily reset LIBOR or one-month LIBOR were valued using the LIBOR swap yield curve which is an observable input from an active market. These derivatives are level 2 fair value estimates in the hierarchy. Other derivatives swapping LIBOR interest payments for another variable interest payment (primarily Prime) are valued using the LIBOR swap yield curve and observable market spreads for the specified index. The markets for these swaps are generally illiquid as indicated by a wide bid/ask spread. The adjustment made for liquidity decreased the valuations by $30 million at December 31, 2017. These derivatives are level 3 fair value estimates.
- Cross-currency interest rate swaps — Derivatives are valued using standard derivative cash flow models. Derivatives hedging foreign-denominated bonds are valued using the LIBOR swap yield curve (for both USD and the foreign-denominated currency), cross-currency basis spreads and forward foreign currency exchange rates. These inputs are observable inputs from active markets. Therefore, the resulting valuation is a level 2 fair value estimate. Amortizing notional derivatives (derivatives whose notional amounts change based on changes in the balance of, or pool of, assets or debt) hedging trust debt use internally derived assumptions for the trust assets' prepayment speeds and default rates to model the notional amortization. Management makes assumptions concerning the extension features of derivatives hedging rate-reset notes denominated in a foreign currency. These inputs are not market observable; therefore, these derivatives are level 3 fair value estimates.
- Floor Income Contracts — Derivatives are valued using an option pricing model. Inputs to the model include the LIBOR swap yield curve and LIBOR interest rate volatilities. The inputs are observable inputs in active markets and these derivatives are level 2 fair value estimates.

The carrying value of borrowings designated as the hedged item in a fair value hedge is adjusted for changes in fair value due to benchmark interest rates and foreign-currency exchange rates. These valuations are determined through standard bond pricing models and option models (when applicable) using the stated terms of the borrowings, and observable yield curves, foreign currency exchange rates and volatilities.

12. Fair Value Measurements (Continued)

The following table summarizes the valuation of our financial instruments that are marked-to-market on a recurring basis. During 2017 and 2016, there were no significant transfers of financial instruments between levels.

	Fair Value Measurements on a Recurring Basis							
	December 31, 2017				December 31, 2016			
(Dollars in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets								
Available-for-sale investments:								
Agency residential mortgage- backed securities	$—	$ —	$ —	$ —	$—	$ 1	$ —	$ 1
Other	—	2	—	2	—	2	—	2
Total available-for-sale investments	—	2	—	2	—	3	—	3
Derivative instruments:(1)								
Interest rate swaps	—	388	4	392	—	553	12	565
Cross-currency interest rate swaps	—	—	88	88	—	—	—	—
Total derivative assets(2)	—	388	92	480	—	553	12	565
Total	$—	$ 390	$ 92	$ 482	$—	$ 556	$ 12	$ 568
Liabilities(3)								
Derivative instruments(1)								
Interest rate swaps	$—	$(144)	$ (45)	$(189)	$—	$(150)	$ (58)	$ (208)
Floor Income Contracts	—	(74)	—	(74)	—	(184)	—	(184)
Cross-currency interest rate swaps	—	(44)	(410)	(454)	—	(53)	(1,243)	(1,296)
Other	—	—	(18)	(18)	—	—	(13)	(13)
Total derivative liabilities(2)	—	(262)	(473)	(735)	—	(387)	(1,314)	(1,701)
Total	$—	$(262)	$(473)	$(735)	$—	$(387)	$(1,314)	$(1,701)

(1) Fair value of derivative instruments excludes accrued interest and the value of collateral.

(2) See “Note 7 — Derivative Financial Instruments” for a reconciliation of gross positions without the impact of master netting agreements to the balance sheet classification.

(3) Borrowings which are the hedged items in a fair value hedge relationship and which are adjusted for changes in value due to benchmark interest rates only are not carried at full fair value and are not reflected in this table.

12. Fair Value Measurements (Continued)

The following tables summarize the change in balance sheet carrying value associated with level 3 financial instruments carried at fair value on a recurring basis.

	Year Ended December 31, 2017			
	Derivative Instruments			
(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
Balance, beginning of period	$(46)	$(1,243)	$(13)	$(1,302)
Total gains/(losses) (realized and unrealized):				
Included in earnings[1]	—	803	(15)	788
Included in other comprehensive income	—	—	—	—
Settlements	5	118	10	133
Transfers in and/or out of level 3	—	—	—	—
Balance, end of period	$(41)	$ (322)	$(18)	$ (381)
Change in unrealized gains/(losses) relating to instruments still held at the reporting date[2]	$ 5	$ 795	$ (5)	$ 795

	Year Ended December 31, 2016			
	Derivative Instruments			
(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
Balance, beginning of period	$(44)	$ (903)	$ (2)	$ (949)
Total gains/(losses) (realized and unrealized):				
Included in earnings[1]	3	(428)	(14)	(439)
Included in other comprehensive income	—	—	—	—
Settlements	3	88	3	94
Transfers in and/or out of level 3[3]	(8)	—	—	(8)
Balance, end of period	$(46)	$(1,243)	$(13)	$(1,302)
Change in unrealized gains/(losses) relating to instruments still held at the reporting date[2]	$ 7	$ (340)	$(11)	$ (344)

12. Fair Value Measurements (Continued)

(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
	Year Ended December 31, 2015			
	Derivative Instruments			
Balance, beginning of period	$(88)	$(117)	$(11)	$(216)
Total gains/(losses) (realized and unrealized):				
Included in earnings(1)	39	(796)	6	(751)
Included in other comprehensive income	—	—	—	—
Settlements	5	10	3	18
Transfers in and/or out of level 3	—	—	—	—
Balance, end of period	$(44)	$(903)	$ (2)	$(949)
Change in unrealized gains/(losses) relating to instruments still held at the reporting date(2)	$ 37	$(783)	$ 9	$(737)

(1) "Included in earnings" is comprised of the following amounts recorded in the specified line item in the consolidated statements of income:

(Dollars in millions)	2017	2016	2015
	Years Ended December 31,		
Gains (losses) on derivative and hedging activities, net	$ 906	$(351)	$(741)
Interest expense	(118)	(88)	(10)
Total	$ 788	$(439)	$(751)

(2) Recorded in "gains (losses) on derivative and hedging activities, net" in the consolidated statements of income.

(3) Consumer Price Index/LIBOR basis swaps were transferred from level 3 to level 2 in the fourth quarter of 2016 due to the conclusion that these swaps now trade in an active market.

The following table presents the significant inputs that are unobservable or from inactive markets used in the recurring valuations of the level 3 financial instruments detailed above.

(Dollars in millions)	Fair Value at December 31, 2017	Valuation Technique	Input	Range (Weighted Average)
Derivatives				
Prime/LIBOR basis swaps	$ (41)	Discounted cash flow	Constant Prepayment Rate	6%
			Bid/ask adjustment to discount rate	.08% — .08% (.08%)
Cross-currency interest rate swaps	(322)	Discounted cash flow	Constant Prepayment Rate	4%
Other	(18)			
Total	$(381)			

The significant inputs that are unobservable or from inactive markets related to our level 3 derivatives detailed in the table above would be expected to have the following impacts to the valuations:

- Prime/LIBOR basis swaps — These swaps do not actively trade in the markets as indicated by a wide bid/ask spread. A wider bid/ask spread will result in a decrease in the overall valuation. In addition, the unobservable inputs include Constant Prepayment Rates of the underlying securitization trust the swap

12. Fair Value Measurements (Continued)

references. A decrease in this input will result in a longer weighted average life of the swap which will increase the value for swaps in a gain position and decrease the value for swaps in a loss position, everything else equal. The opposite is true for an increase in the input.

- Cross-currency interest rate swaps — The unobservable inputs used in these valuations are Constant Prepayment Rates of the underlying securitization trust the swap references. A decrease in this input will result in a longer weighted average life of the swap. All else equal in a typical currency market, this will result in a decrease to the valuation due to the delay in the cash flows of the currency exchanges as well as diminished liquidity in the forward exchange markets as you increase the term. The opposite is true for an increase in the input.

The following table summarizes the fair values of our financial assets and liabilities, including derivative financial instruments.

	December 31, 2017			December 31, 2016		
(Dollars in millions)	**Fair Value**	**Carrying Value**	**Difference**	**Fair Value**	**Carrying Value**	**Difference**
Earning assets						
FFELP Loans	$ 82,271	$ 81,703	$ 568	$ 86,626	$ 87,730	$(1,104)
Private Education Loans	24,421	23,419	1,002	23,191	23,340	(149)
Cash and investments[1]	5,034	5,034	—	5,203	5,203	—
Total earning assets	111,726	110,156	1,570	115,020	116,273	(1,253)
Interest-bearing liabilities						
Short-term borrowings	4,783	4,771	(12)	2,346	2,334	(12)
Long-term borrowings	104,921	105,012	91	109,826	112,368	2,542
Total interest-bearing liabilities	109,704	109,783	79	112,172	114,702	2,530
Derivative financial instruments						
Floor Income Contracts	(74)	(74)	—	(184)	(184)	—
Interest rate swaps	203	203	—	357	357	—
Cross-currency interest rate swaps	(366)	(366)	—	(1,296)	(1,296)	—
Other	(18)	(18)	—	(13)	(13)	—
Excess of net asset fair value over carrying value			$1,649			$ 1,277

(1) "Cash and investments" includes available-for-sale investments whose cost basis is $2 million and $3 million at December 31, 2017 and 2016, respectively, versus a fair value of $2 million and $3 million at December 31, 2017 and 2016, respectively.

13. Commitments, Contingencies and Guarantees

Legal Proceedings

The Company has been named as defendant in a number of putative class action cases alleging violations of various state and federal consumer protection laws including the Telephone Consumer Protection Act ("TCPA"), the Consumer Financial Protection Act of 2010 ("CFPA"), the Fair Credit Reporting Act ("FCRA"), the Fair Debt Collection Practices Act ("FDCPA") and various other state consumer protection laws.

On January 18, 2017, the CFPB and Attorneys General for the State of Illinois and the State of Washington initiated civil actions naming Navient Corporation and several of its subsidiaries as defendants alleging violations

13. Commitments, Contingencies and Guarantees (Continued)

of certain Federal and State consumer protection statutes, including the CFPA, the FCPA, FCRA, FDCPA and various state consumer protection laws. On October 5, 2017, the Attorney General for the Commonwealth of Pennsylvania initiated a civil action against Navient Corporation and Navient Solutions, LLC, containing similar alleged violations of the CFPA and the Pennsylvania Unfair Trade Practices and Consumer Protection Law. We refer to the Illinois Attorney General, the Pennsylvania Attorney General and the Washington Attorney General collectively as the "Attorneys General." We intend to vigorously defend against the allegations in each of these cases. For additional information on these civil actions, please refer to section entitled "Regulatory Matters" below.

At this point in time, the Company is unable to anticipate the timing of a resolution or the ultimate impact that these legal proceedings may have on the Company's consolidated financial position, liquidity, results of operation or cash flows. As a result, it is not possible at this time to estimate a range of potential exposure, if any, for amounts that may be payable in connection with these matters and reserves have not been established. It is possible that an adverse ruling or rulings may have a material adverse impact on the Company.

Regulatory Matters

With respect to alleged civil violations of the Servicemembers Civil Relief Act (the "SCRA"), Navient Solutions, LLC ("Solutions"), a wholly owned subsidiary of Navient, and Sallie Mae Bank entered into a consent order with the DOJ in May 2014. The DOJ consent order (the "DOJ Order") covers all loans either owned by Sallie Mae Bank or serviced by Solutions from November 28, 2005 until the effective date of the settlement. In the third quarter of 2016, the Company completed the distributions from the fund by distributing the remaining funds to charities approved by the DOJ pursuant to the terms of the order. The total reserves established by the Company in 2013 and 2014 to cover these costs were $177 million, and as of December 31, 2017, substantially all of this amount had been paid to customers or credited or refunded to customer accounts. The final cost of these proceedings will remain uncertain until the remaining consent order is lifted or terminates in accordance with its terms in late 2018. The Company believes it has fulfilled the terms of the DOJ Order.

As previously disclosed, the Company and various of its subsidiaries have been subject to the following investigations and inquiries:

- In December 2013, Navient received Civil Investigative Demands ("CIDs") issued by the State of Illinois Office of Attorney General and the State of Washington Office of the Attorney General and multiple other state Attorneys General. According to the CIDs, the investigations were initiated to ascertain whether any practices declared to be unlawful under the Consumer Fraud and Deceptive Business Practices Act have occurred or are about to occur. The Company subsequently received separate but similar CIDs or subpoenas from the Attorneys General of the District of Columbia and Kansas.
- In April 2014, Solutions received a CID from the Consumer Financial Protection Bureau (the "CFPB") as part of the CFPB's separate investigation regarding allegations relating to Navient's disclosures and assessment of late fees and other matters. Navient has received a series of supplemental CIDs on these matters. In August 2015, Solutions received a letter from the CFPB notifying Solutions that, in accordance with the CFPB's discretionary Notice and Opportunity to Respond and Advise ("NORA") process, the CFPB's Office of Enforcement is considering recommending that the CFPB take legal action against Solutions. The NORA letter related to a previously disclosed investigation into Solutions' disclosures and assessment of late fees and other matters and states that, in connection with any action, the CFPB may seek restitution, civil monetary penalties and corrective action against Solutions. The Company responded to the NORA letter in September 2015.

13. Commitments, Contingencies and Guarantees (Continued)

- In November 2014, Navient's subsidiary, Pioneer Credit Recovery, Inc. ("Pioneer"), received a CID from the CFPB as part of the CFPB's investigation regarding Pioneer's activities relating to rehabilitation loans and collection of defaulted student debt.
- In December 2014, Solutions received a subpoena from the New York Department of Financial Services (the "NY DFS") as part of the NY DFS's inquiry with regard to whether persons or entities have engaged in fraud or misconduct with respect to a financial product or service under New York Financial Services Law or other laws.

On January 18, 2017, the CFPB and Attorneys General for the State of Illinois and the State of Washington initiated civil actions naming Navient Corporation and several of its subsidiaries as defendants alleging violations of Federal and State consumer protection statutes, including the DFPA, FCRA, FDCPA and various state consumer protection laws. On October 5, 2017, the Attorney General for the Commonwealth of Pennsylvania initiated a civil action against Navient Corporation and Navient Solutions, LLC, alleging violations of the CFPA and the Pennsylvania Unfair Trade Practices and Consumer Protection Law. These civil actions are related to matters which were covered under the CIDs and the NORA letter discussed above that were previously issued by the CFPB and the Attorneys General. The Company filed its Motion to Dismiss on March 20, 2017 with respect to the Attorneys General actions and on March 24, 2017 with respect to the CFPB action. In relation to the CFPB action, after a hearing, our Motion to Dismiss was denied in full in August 2017. In relation to the Washington action, following a hearing, our Motion to Dismiss was denied in full in July 2017. In relation to the Illinois action, a hearing on our Motion to Dismiss was held on July 18, 2017 and no ruling has been issued as of the date of this Form 10-K. In addition to these matters, a number of lawsuits have been filed by nongovernmental parties or, in the future, may be filed by additional governmental or nongovernmental parties seeking damages or other remedies related to similar issues raised by the CFPB and the Attorneys General. In relation to the Pennsylvania Attorney General lawsuit, the Company filed its Motion to Dismiss on December 22, 2017. This motion has not been heard by the court. As the Company has previously stated, we believe the suits improperly seek to impose penalties on Navient based on new, unannounced servicing standards applied retroactively only against one servicer, and that the allegations are false. As stated above, we intend to vigorously defend against the allegations in each of these cases.

In addition, Navient and its subsidiaries are subject to examination or regulation by the SEC, CFPB, FFIEC, ED and various state agencies as part of its ordinary course of business. Items or matters similar to or different from those described above may arise during the course of those examinations. We also routinely receive inquiries or requests from various regulatory bodies or government agencies concerning our business or our assets. Generally, the Company endeavors to cooperate with each such inquiry or request.

Under the terms of the Separation Agreement, Navient has agreed to indemnify SLM BankCo for all claims, actions, damages, losses or expenses that may arise from the conduct of all activities of pre-Spin-Off SLM BankCo occurring prior to the Spin-Off other than those specifically excluded in the Separation and Distribution Agreement. As a result, subject to the terms, conditions and limitations set forth in the Separation and Distribution Agreement, Navient has agreed to indemnify and hold harmless Sallie Mae and its subsidiaries, including Sallie Mae Bank from liabilities arising out of the regulatory matters and CFPB and State Attorneys General lawsuits mentioned above, other than fines or penalties directly levied against Sallie Mae Bank and other matters specifically excluded. Navient has no additional reserves related to indemnification matters with SLM BankCo as of December 31, 2017.

13. Commitments, Contingencies and Guarantees (Continued)

OIG Audit

The Office of the Inspector General (the "OIG") of ED commenced an audit regarding Special Allowance Payments ("SAP") on September 10, 2007. On September 25, 2013, we received the final audit determination of Federal Student Aid (the "Final Audit Determination") on the final audit report issued by the OIG on August 3, 2009 related to this audit. The Final Audit Determination concurred with the final audit report issued by the OIG and instructed us to make adjustment to our government billing to reflect the policy determination. In August 2016, we filed our notice of appeal relating to this Final Audit Determination to the Administrative Actions and Appeals Service Group of ED. A hearing on this matter was held in April 2017 and a ruling has not yet been issued. We continue to believe that our SAP billing practices were proper, considering then-existing ED guidance and lack of applicable regulations. The Company established a reserve for this matter in 2014 as part of the total reserve for pending regulatory matters discussed previously and does not believe, at this time, that an adverse ruling would have a material effect on the Company as a whole.

Contingencies

In the ordinary course of business, we and our subsidiaries are defendants in or parties to pending and threatened legal actions and proceedings including actions brought on behalf of various classes of claimants. These actions and proceedings may be based on alleged violations of consumer protection, securities, employment and other laws. In certain of these actions and proceedings, claims for substantial monetary damage are asserted against us and our subsidiaries. We and our subsidiaries are also subject to potential unasserted claims by third parties.

In the ordinary course of business, we and our subsidiaries are subject to regulatory examinations, information gathering requests, inquiries and investigations. In connection with formal and informal inquiries in these cases, we and our subsidiaries receive numerous requests, subpoenas and orders for documents, testimony and information in connection with various aspects of our regulated activities.

In view of the inherent difficulty of predicting the outcome of such litigation and regulatory matters, we cannot predict what the eventual outcome of the pending matters will be, what the timing or the ultimate resolution of these matters will be, or what the eventual loss, fines or penalties, if any, related to each pending matter may be.

We are required to establish reserves for litigation and regulatory matters where those matters present loss contingencies that are both probable and estimable. When loss contingencies are not both probable and estimable, we do not establish reserves.

Based on current knowledge, reserves have been established for certain litigation, regulatory matters, and unasserted contract claims where the loss is both probable and estimable. Based on current knowledge, management does not believe that loss contingencies, if any, arising from pending investigations, litigation or regulatory matters will have a material adverse effect on our consolidated financial position, liquidity, results of operations or cash flows, except as otherwise disclosed.

14. Income Taxes

Reconciliations of the statutory U.S. federal income tax rates to our effective tax rate for continuing operations follow:

	Years Ended December 31,		
	2017	2016	2015
Statutory rate	35.0%	35.0%	35.0%
DTA Remeasurement Loss[1]	27.2	—	—
Net excess tax benefits related to stock-based incentive payments	(.7)	—	—
State tax, net of federal benefit	.8	3.8	2.6
Other, net	(.5)	(.3)	.1
Effective tax rate	61.8%	38.5%	37.7%

(1) The TCJA, enacted on December 22, 2017, made significant changes to all aspects of income taxation, including a reduction to the corporate federal statutory tax rate. GAAP requires the effects of the TCJA to be recognized in the period the law is enacted, even though the effective date of the law for most provisions is January 1, 2018. The primary impact to us is the reduction to the corporate federal statutory tax rate from 35 percent to 21 percent as of January 1, 2018. This rate reduction required us to remeasure our deferred tax asset at December 31, 2017, at the 21 percent corporate federal statutory tax rate and resulted in a DTA Remeasurement Loss of $208 million for GAAP, which is reflected as incremental income tax expense in the fourth quarter of 2017.

The effective tax rate varies from the statutory U.S. federal rate of 35 percent primarily due to the DTA Remeasurement Loss and the net excess tax benefits related to stock-based incentive payments for the year ended December 31, 2017, and the impact of state taxes, net of federal benefit, for the years ended December 31, 2017, 2016 and 2015.

Income tax expense consists of:

	December 31,		
(Dollars in millions)	2017	2016	2015
Current provision/(benefit):			
Federal	$ 77	$246	$136
State	(3)	47	22
Foreign	3	1	—
Total current provision/(benefit)	77	294	158
Deferred provision/(benefit):			
Federal	385	115	398
State	11	18	41
Foreign	(1)	—	—
Total deferred provision/(benefit)	395	133	439
Provision for income tax expense/(benefit)	$472	$427	$597

14. Income Taxes (Continued)

The tax effect of temporary differences that give rise to deferred tax assets and liabilities include the following:

(Dollars in millions)	December 31, 2017	December 31, 2016
Deferred tax assets:		
Loan reserves	$317	$581
Education loan premiums and discounts, net	52	74
Operating loss and credit carryovers	22	5
Stock-based compensation plans	18	32
Accrued expenses not currently deductible	24	33
Market value adjustments on education loans, investments and derivatives	9	65
Deferred revenue	—	37
Other	14	40
Total deferred tax assets	456	867
Deferred tax liabilities:		
Unrealized derivatives and investment gains and losses, net	23	3
Original issue discount on borrowings	11	27
Debt repurchases	8	—
Other	22	35
Total deferred tax liabilities	64	65
Net deferred tax assets	$392	$802

Included in operating loss and credit carryovers is a valuation allowance of $42 million and $7 million as of December 31, 2017 and 2016, respectively, against a portion of the Company's federal and state deferred tax assets. The valuation allowance is primarily attributable to deferred tax assets for federal and state net operating loss carryforwards that management believes it is more likely than not will expire prior to being realized. The ultimate realization of the deferred tax assets is dependent upon the generation of future taxable income of the appropriate character (i.e. capital or ordinary) during the period in which the temporary differences become deductible. Management considers, among other things, the economic slowdown, the scheduled reversals of deferred tax liabilities, and the history of positive taxable income available for net operating loss carrybacks in evaluating the realizability of the deferred tax assets.

As of December 31, 2017, we have gross federal net operating loss ("NOL") carryforwards of $110 million (which begin to expire in 2029) and gross state NOL carryforwards of $576 million (which begin to expire in 2021). Tax-effected NOL amounts of $23 million (federal) and $39 million (state) have corresponding valuation allowances of $8 million (federal) and $34 million (state). We also have $2 million in foreign tax credit carryforwards.

14. Income Taxes (Continued)

Accounting for Uncertainty in Income Taxes

The following table summarizes changes in unrecognized tax benefits:

(Dollars in millions)	December 31, 2017	2016	2015
Unrecognized tax benefits at beginning of year	$ 73.0	$56.3	$51.9
Increases resulting from tax positions taken during a prior period	.7	19.9	1.6
Decreases resulting from tax positions taken during a prior period	(1.8)	(5.6)	(1.8)
Increases resulting from tax positions taken during the current period	4.4	4.4	6.9
Decreases related to settlements with taxing authorities	(5.1)	(.1)	—
Increases related to settlements with taxing authorities	—	—	—
Reductions related to the lapse of statute of limitations	(13.8)	(1.9)	(2.3)
Unrecognized tax benefits at end of year	$ 57.4	$73.0	$56.3

As of December 31, 2017, the gross unrecognized tax benefits are $57.4 million. Included in the $57.4 million are $45.3 million of unrecognized tax benefits that, if recognized, would favorably impact the effective tax rate.

The Company or one of its subsidiaries files income tax returns at the U.S. federal level, in most U.S. states, and various foreign jurisdictions. All periods prior to 2014 are closed for federal examination purposes. Various combinations of subsidiaries, tax years, and jurisdictions remain open for review, subject to statute of limitations periods (typically 3 to 4 prior years). We do not expect the resolution of open audits to have a material impact on our unrecognized tax benefits.

15. Segment Reporting

We monitor and assess our ongoing operations and results by three primary operating segments — the FFELP Loans operating segment, the Private Education Loans operating segment and the Business Services operating segment. These three operating segments meet the quantitative thresholds for reportable segments. Accordingly, the results of operations of our FFELP Loans, Private Education Loans and Business Services segments are presented separately. We have smaller operating segments that consist of business operations that are winding down. These operating segments do not meet the quantitative thresholds to be considered reportable segments. As a result, the results of operations for these operating segments are combined with gains/losses from the repurchase of debt, the financial results of our corporate liquidity portfolio, unallocated overhead, restructuring/other reorganization expenses, regulatory-related costs and the deferred tax asset remeasurement loss recognized due to the enactment of the TCJA in the fourth quarter of 2017 within the Other reportable segment. The management reporting process measures the performance of our operating segments based on our management structure, as well as the methodology we used to evaluate performance and allocate resources. Management, including our chief operating decision makers, evaluates the performance of our operating segments based on their profitability. As discussed further below, we measure the profitability of our operating segments based on "Core Earnings." Accordingly, information regarding our reportable segments is provided based on a "Core Earnings" basis.

FFELP Loans Segment

In the FFELP Loans segment, we acquire and finance FFELP Loans. Although FFELP Loans are no longer originated, we continue to pursue acquisitions of FFELP Loan portfolios. These acquisitions leverage our

15. Segment Reporting (Continued)

servicing scale and generate incremental earnings and cash flow. In this segment, we generate revenue primarily through net interest income on the FFELP Loan portfolio (after provision for loan losses). This segment is expected to generate significant amounts of earnings and cash flow over the remaining life of the portfolio.

We are currently the largest private sector holder of FFELP Loans. Navient's portfolio of FFELP Loans as of December 31, 2017 was $81.7 billion. We expect this portfolio to have an amortization period in excess of 20 years with a 7-year remaining weighted average life. Navient's goal is to maximize the amount and optimize the timing of the cash flows generated by its FFELP Loan portfolio. Navient also seeks to acquire FFELP Loan portfolios from third parties to add net interest income and servicing revenue. During the year ended December 31, 2017, Navient acquired $5.7 billion of FFELP Loans. FFELP Loans are insured or guaranteed by state or not-for-profit agencies and are protected by contractual rights to recovery from the United States pursuant to guaranty agreements among ED and these agencies. These guaranty agreements generally cover at least 97 percent of a FFELP Loan's principal and accrued interest for loans disbursed. For more discussion of the FFELP and related credit support mechanisms, see Appendix A "Description of Federal Family Education Loan Program."

As a result of the long-term funding strategy used for our FFELP Loan portfolio and the insurance and guarantees provided on these loans, the portfolio generates consistent and predictable cash flows. As of December 31, 2017, approximately 84 percent of the FFELP Loans held by Navient were funded to term with non-recourse, long-term securitization debt.

The Higher Education Act of 1965 ("HEA") continues to regulate every aspect of FFELP Loans, including ongoing communications with borrowers and default aversion requirements. Failure to service FFELP Loans properly could jeopardize the insurance, guarantees and federal support on these loans. The insurance and guarantees on Navient's existing FFELP Loans were not affected by the termination of FFELP originations.

The following table includes asset information for our FFELP Loans segment.

	December 31,	
(Dollars in millions)	**2017**	**2016**
FFELP Loans, net	$81,703	$87,730
Cash and investments[1]	2,750	3,212
Other	2,404	1,907
Total assets	$86,857	$92,849

[1] Includes restricted cash and investments.

Private Education Loans Segment

In this segment, we originate, acquire, finance, and service our Private Education Loans. With the acquisition of Earnest, we began originating Private Education Refinance Loans. Private Education Loans primarily bridge the gap between the cost of higher education and the amount funded through financial aid, federal loans, or students' and families' resources. They also allow borrowers to refinance existing education loans at a lower rate. Originations and acquisitions leverage our servicing scale and generate incremental earnings and cash flow. In this segment, we generate revenue primarily through net interest income on the Private Education Loan portfolio (after provision for loan losses). This segment is expected to generate significant amounts of earnings and cash flow over the remaining life of the portfolio.

15. Segment Reporting (Continued)

With over 40 years of experience, we have seen that borrowers who graduate gain the benefit of their investment in education with higher levels of employment, higher incomes and stronger financial health. Our loan products are focused on helping consumers refinance their education loans at the lower rates they have earned. We believe our product offerings, digital marketing strategies and origination platform provide a unique competitive advantage. At December 31, 2017, Navient held $1.3 billion of Private Education Refinance Loans, compared with $225 million of Private Education Refinance Loans held at December 31, 2016.

Unlike FFELP Loans, the holder of a Private Education Loan bears the full credit risk of the borrower and any cosigner. Navient believes the credit risk of the Private Education Loans it owns is well managed through the rigorous underwriting practices and risk-based pricing applied when the loans were originated, the continued high levels of qualified cosigners, our internal servicing and risk mitigation practices, and our careful use of forbearance and loan modification programs. Navient believes that these elements and practices reduce the risk of payment interruptions and defaults on its Private Education Loan portfolio.

We are currently the largest holder of Private Education Loans. Navient's portfolio of Private Education Loans as of December 31, 2017 was $23.4 billion. We expect this portfolio to have an amortization period in excess of 20 years with a 6-year remaining weighted average life. Navient's goal is to maximize and optimize the timing of the cash flows generated by its Private Education Loan portfolio. As of December 31, 2017, approximately 55 percent of the Private Education Loans held by Navient were funded to term with non-recourse, long-term securitization debt.

The following table includes asset information for our Private Education Loans segment.

	December 31,	
(Dollars in millions)	2017	2016
Private Education Loans, net	$23,419	$23,340
Cash and investments[1]	706	667
Other	1,137	1,567
Total assets	$25,262	$25,574

[1] Includes restricted cash and investments.

Business Services Segment

Our Business Services segment generates revenue from business processing services related to servicing, asset recovery and other business processing activities. Within this segment, we generate revenue primarily through servicing our FFELP Loan portfolio as well as servicing education loans for Guarantors of FFELP Loans and other institutions, including ED. We provide asset recovery services for loans and receivables on behalf of Guarantors of FFELP Loans and higher education institutions. In addition, we provide asset recovery and other business processing solutions for federal, state, court, and municipal clients, public authorities, and health care organizations. This market is highly fragmented and provides attractive organic growth opportunities.

Non-Education Related Fee Revenues

Non-education related revenues increased 21 percent, from $174 million in 2016 to $211 million in 2017. Non-education related fee revenues in the Business Services segment accounted for 20 percent of total Business

15. Segment Reporting (Continued)

Services segment revenues in 2017 compared with 17 percent and 10 percent in 2016 and 2015, respectively. This revenue is generated from over 1,000 clients in the government, municipal and health care markets.

- Non-education related fee revenues from government services totaled $133 million in 2017 compared to $106 million in 2016. Government services include receivables management services and account processing solutions for state governments, agencies, court systems, municipalities, toll authorities and financial services entities.
- Non-education related fee revenues from health care revenue cycle management (“RCM”) services totaled $78 million in 2017 compared to $68 million in 2016. Health care RCM services include revenue cycle outsourcing, accounts receivable management, extended business office support and consulting engagements provided to hospitals, health care systems and other health care providers.

Education Related Fee Revenues

In 2017, federal education loan (FFELP and ED) related revenues in the Business Services segment accounted for 78 percent of total Business Services segment revenues compared with 80 percent in 2016.

Navient is currently the largest servicer and collector of loans made under the FFELP program, and the majority of our income has been derived, directly or indirectly, from our portfolio of FFELP Loans and the servicing and asset recovery we provide for Guarantors and third-party owners of FFELP Loans. In 2010, Congress passed legislation ending the origination of education loans under FFELP. As a result, the revenue we earn from providing servicing and asset recovery services on FFELP Loans will decline over time.

Servicing revenues from the FFELP Loans we own represent intercompany charges to the FFELP Loans segment at rates paid to us by the securitization trusts which own the loans. These fees are contractually the first payment priority of the trusts after the payment of the trustee fees and exceed the actual cost of servicing the loans. Intercompany loan servicing revenues declined to $348 million in 2017 from $389 million in 2016. We expect intercompany loan servicing revenues will continue to decline as our FFELP Loan portfolio amortizes.

Since 2009, Navient has been one of four TIVAS that provides loan servicing for federal loans owned by ED. We continually strive to help our customers successfully navigate the repayment of their loans. Under the contract, we seek to improve on the performance metrics that determine the allocation of new accounts under the servicing contract with ED. Under this servicing contract as of December 31, 2017, we service approximately 6.1 million accounts, or $205.9 billion in loans. We earned $150 million of revenue under the contract for the year ended December 31, 2017. This contract currently expires in 2019.

In December 2016, Great Lakes Higher Education Assistance Corp. (“Great Lakes”) assumed control of United Student Aid Funds, Inc. (“USAF”). As part of this transfer, Great Lakes terminated our contracts with USAF and Northwest Education Loan Association (“NELA”), effective as of December 31, 2017. At the same time, they notified us of their intent to rebid the services we provided for USAF, NELA and Great Lakes. In the third quarter of 2017, we entered into a new contract with Great Lakes in which we agreed to provide asset recovery and portfolio management services on the combined Great Lakes, USAF and NELA portfolios. We were not awarded the default aversion services component of the contract, which resulted in the recognition of $47 million of previously deferred revenue, net of a reserve. Including the $47 million of previously deferred revenue, education related fee revenues related to these services totaled $238 million in 2017 compared to $172 million in 2016.

Since 1997, Navient has provided asset recovery services on defaulted education loans to ED. In February 2015, ED did not grant an additional term extension (“ATE”) and this contract expired by its terms on

15. Segment Reporting (Continued)

February 21, 2015. As a result, our Pioneer Credit Recovery (“Pioneer”) subsidiary stopped receiving new account placements under the contract. Shortly after that decision by ED, Pioneer filed a bid protest against ED, which bid protest was eventually consolidated with several other related protests. In an effort to resolve that litigation, in May 2017, ED awarded Pioneer a new ATE on substantially similar terms to the additional term extensions awarded to other contractors in 2015. In December 2017, Pioneer received new accounts under that new contract.

In January 2018, ED completed its ongoing procurement for replacement collection contracts originally begun in 2016. Neither Pioneer nor our other subsidiary, General Revenue Corporation, received a contract award. In February 2018, Pioneer filed a bid protest which protest has been consolidated with the other protests on this procurement. As of the date of this report, ED has the right to place additional accounts with Pioneer under its ATE during the pendency of the new protests. ED’s ability to do so may be affected by any temporary restraining order or injunction granted by the court in the consolidated protests. For additional information on the ED collection contract, please refer to Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Business Segment Earnings Summary — ‘Core Earnings Basis’ — Business Services Segment” of this Form 10-K. As a leading provider of asset recovery services, Pioneer Credit Recovery has a long track record of assisting individuals who default on their student loan payments to recover from the negative consequences of default. Since 2012, Navient and its subsidiaries have helped more than 261,000 borrowers successfully rehabilitate their loans.

On April 4, 2016, ED published the first part of a two-part RFP related to a new servicing platform for the DSLP. The first part of the RFP focused on screening candidates’ capabilities relative to certain published criteria. In July 2016, Navient was selected as one of three companies eligible to submit responses in the second part of the RFP process. In January 2017, Navient submitted its bid for ED’s single servicing solution contract. While ED announced in May 2017 that it planned to select a single servicer for the DSLP, in August of 2017, the Department cancelled the prior RFP and announced a new upcoming solicitation for the FSA Next Generation Processing and Servicing Environment. Based upon the statements from ED, it is anticipated that the new environment will provide for a single data processing platform to house all student loan information while at the same time allowing for customer account servicing to be performed either by a single contract servicer or by multiple contract servicers. On February 20, 2018, ED issued Phase 1 of a new RFP entitled the Solicitation for the Next Generation Financial Services Environment which is intended to centralize student loan servicing on a single platform. Responses to Phase 1 are due by April 6, 2018.

At December 31, 2017 and 2016, the Business Services segment had total assets of $649 million and $587 million, respectively.

Other Segment

Our Other segment primarily consists of activities of our holding company, including the repurchase of debt, our corporate liquidity portfolio, unallocated overhead, restructuring/other reorganization expenses, regulatory-related costs, and the deferred tax asset remeasurement loss recognized due to the enactment of the TCJA in the fourth quarter of 2017. We also include results from certain smaller wind-down operations within this segment.

Unallocated corporate overhead is comprised of costs related to executive management, the board of directors, accounting, finance, legal, human resources, compliance and risk management, and stock-based compensation expense. Unallocated information technology costs are related to infrastructure and operations.

15. Segment Reporting (Continued)

At December 31, 2017 and 2016, the Other segment had total assets of $2.2 billion and $2.1 billion, respectively.

Measure of Profitability

We prepare financial statements and present financial results in accordance with GAAP. However, we also evaluate our business segments and present financial results on a basis that differs from GAAP. We refer to this different basis of presentation as "Core Earnings." We provide this "Core Earnings" basis of presentation on a consolidated basis for each business segment because this is what we review internally when making management decisions regarding our performance and how we allocate resources. We also refer to this information in our presentations with credit rating agencies, lenders and investors. Because our "Core Earnings" basis of presentation corresponds to our segment financial presentations, we are required by GAAP to provide "Core Earnings" disclosure in the notes to our consolidated financial statements for our business segments.

"Core Earnings" are not a substitute for reported results under GAAP. We use "Core Earnings" to manage our business segments because "Core Earnings" reflect adjustments to GAAP financial results for three items, discussed below, that are either related to the Spin-Off or create significant volatility mostly due to timing factors generally beyond the control of management. Accordingly, we believe that "Core Earnings" provide management with a useful basis from which to better evaluate results from ongoing operations against the business plan or against results from prior periods. Consequently, we disclose this information because we believe it provides investors with additional information regarding the operational and performance indicators that are most closely assessed by management. When compared to GAAP results, the three items we remove to result in our "Core Earnings" presentations are:

1. Unrealized mark-to-market gains/losses resulting from our use of derivative instruments to hedge our economic risks that do not qualify for hedge accounting treatment or do qualify for hedge accounting treatment but result in ineffectiveness;

2. The accounting for goodwill and acquired intangible assets; and

3. The financial results attributable to the operations of SLM BankCo prior to the Spin-Off and related restructuring and reorganization expense incurred in connection with the Spin-Off, including the restructuring expenses related to the restructuring initiative launched in second-quarter 2015 to simplify and streamline the Company's management structure post-Spin-Off. For GAAP purposes, Navient reflected the deemed distribution of SLM BankCo on April 30, 2014. For "Core Earnings," we exclude the consumer banking business (SLM BankCo) as if it had never been a part of Navient's historical results prior to the deemed distribution of SLM BankCo on April 30, 2014.

While GAAP provides a uniform, comprehensive basis of accounting, for the reasons described above, our "Core Earnings" basis of presentation does not. "Core Earnings" are subject to certain general and specific limitations that investors should carefully consider. For example, there is no comprehensive, authoritative guidance for management reporting. Our "Core Earnings" are not defined terms within GAAP and may not be comparable to similarly titled measures reported by other companies. Accordingly, our "Core Earnings" presentation does not represent a comprehensive basis of accounting. Investors, therefore, may not be able to compare our performance with that of other financial services companies based upon "Core Earnings." "Core Earnings" results are only meant to supplement GAAP results by providing additional information regarding the operational and performance indicators that are most closely used by management, our board of directors, credit rating agencies, lenders and investors to assess performance.

15. Segment Reporting (Continued)

Segment Results and Reconciliations to GAAP

(Dollars in millions)	FFELP Loans	Private Education Loans	Business Services	Other	Eliminations[1]	Total "Core Earnings"	Reclassifications	Additions/ (Subtractions)	Total Adjustments[2]	Total GAAP
	Year Ended December 31, 2017						Adjustments			
Interest income:										
Education loans	$2,679	$1,634	$ —	$ —	$ —	$4,313	$ 69	$(55)	$ 14	$4,327
Other loans	—	—	—	13	—	13	—	—	—	13
Cash and investments	30	4	—	9	—	43	—	—	—	43
Total interest income	2,709	1,638	—	22	—	4,369	69	(55)	14	4,383
Total interest expense	2,016	825	—	149	—	2,990	(8)	(11)	(19)	2,971
Net interest income (loss)	693	813	—	(127)	—	1,379	77	(44)	33	1,412
Less: provisions for loan losses	42	382	—	2	—	426	—	—	—	426
Net interest income (loss) after provisions for loan losses	651	431	—	(129)	—	953	77	(44)	33	986
Other income (loss):										
Servicing revenue	49	10	579	—	(348)	290	—	—	—	290
Asset recovery and business processing revenue	—	—	475	—	—	475	—	—	—	475
Other income	—	—	—	19	—	19	(77)	89	12	31
Gains on sales of loans and investments	—	—	—	3	—	3	—	—	—	3
Losses on debt repurchases	—	—	—	(3)	—	(3)	—	—	—	(3)
Total other income (loss)	49	10	1,054	19	(348)	784	(77)	89	12	796
Expenses:										
Direct operating expenses	357	165	527	27	(348)	728	—	—	—	728
Overhead expenses	—	—	—	238	—	238	—	—	—	238
Operating expenses	357	165	527	265	(348)	966	—	—	—	966
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	—	23	23	23
Restructuring/other reorganization expenses	—	—	—	29	—	29	—	—	—	29
Total expenses	357	165	527	294	(348)	995	—	23	23	1,018
Income (loss) before income tax expense (benefit)	343	276	527	(404)	—	742	—	22	22	764
Income tax expense (benefit)[3]	124	99	190	78	—	491	—	(19)	(19)	472
Net income (loss)	$ 219	$ 177	$ 337	$(482)	$ —	$ 251	$ —	$ 41	$ 41	$ 292

[1] The eliminations in servicing revenue and direct operating expense represent the elimination of intercompany servicing revenue where the Business Services segment performs the loan servicing function for the FFELP Loans segment.

[2] "Core Earnings" adjustments to GAAP:

(Dollars in millions)	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
	Year Ended December 31, 2017		
Net interest income after provisions for loan losses	$33	$ —	$ 33
Total other income (loss)	12	—	12
Goodwill and acquired intangible asset impairment and amortization	—	23	23
Total "Core Earnings" adjustments to GAAP	$45	$(23)	22
Income tax expense (benefit)			(19)
Net income (loss)			$ 41

[3] Income taxes are based on a percentage of net income before tax for the individual reportable segment with the impact of the DTA Remeasurement Loss included in the Other segment.

15. Segment Reporting (Continued)

	Year Ended December 31, 2016									
							Adjustments			
(Dollars in millions)	FFELP Loans	Private Education Loans	Business Services	Other	Eliminations(1)	Total "Core Earnings"	Reclassifications	Additions/ (Subtractions)	Total Adjustments(2)	Total GAAP
Interest income:										
Education loans	$2,395	$1,587	$ —	$ —	$ —	$3,982	$ 247	$(114)	$133	$4,115
Other loans	—	—	—	9	—	9	—	—	—	9
Cash and investments	16	2	—	4	—	22	—	—	—	22
Total interest income	2,411	1,589	—	13	—	4,013	247	(114)	133	4,146
Total interest expense	1,592	705	—	113	—	2,410	31	—	31	2,441
Net interest income (loss)	819	884	—	(100)	—	1,603	216	(114)	102	1,705
Less: provisions for loan losses	43	383	—	3	—	429	—	—	—	429
Net interest income (loss) after provisions for loan losses	776	501	—	(103)	—	1,174	216	(114)	102	1,276
Other income (loss):										
Servicing revenue	55	14	624	—	(389)	304	—	—	—	304
Asset recovery and business processing revenue	—	—	390	—	—	390	—	—	—	390
Other income	—	—	—	14	—	14	(216)	326	110	124
Gains on debt repurchases	—	—	—	1	—	1	—	—	—	1
Total other income (loss)	55	14	1,014	15	(389)	709	(216)	326	110	819
Expenses:										
Direct operating expenses	401	167	524	28	(389)	731	—	—	—	731
Overhead expenses	—	—	—	220	—	220	—	—	—	220
Operating expenses	401	167	524	248	(389)	951	—	—	—	951
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	—	36	36	36
Restructuring/other reorganization expenses	—	—	—	—	—	—	—	—	—	—
Total expenses	401	167	524	248	(389)	951	—	36	36	987
Income (loss) before income tax expense (benefit)	430	348	490	(336)	—	932	—	176	176	1,108
Income tax expense (benefit)(3)	158	129	182	(124)	—	345	—	82	82	427
Net income (loss)	$ 272	$ 219	$ 308	$(212)	$ —	$ 587	$ —	$ 94	$ 94	$ 681

(1) The eliminations in servicing revenue and direct operating expense represent the elimination of intercompany servicing revenue where the Business Services segment performs the loan servicing function for the FFELP Loans segment.

(2) "Core Earnings" adjustments to GAAP:

	Year Ended December 31, 2016		
(Dollars in millions)	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
Net interest income after provisions for loan losses	$102	$ —	$102
Total other income (loss)	110	—	110
Goodwill and acquired intangible asset impairment and amortization	—	36	36
Total "Core Earnings" adjustments to GAAP	$212	$(36)	176
Income tax expense (benefit)			82
Net income (loss)			$ 94

(3) Income taxes are based on a percentage of net income before tax for the individual reportable segment with the impact of the DTA Remeasurement Loss included in the Other segment.

15. Segment Reporting (Continued)

(Dollars in millions)	FFELP Loans	Private Education Loans	Business Services	Other	Eliminations[(1)]	Total "Core Earnings"	Reclassifications	Additions/ (Subtractions)	Total Adjustments[(2)]	Total GAAP
	Year Ended December 31, 2015						Adjustments			
Interest income:										
Education loans	$2,112	$1,756	$ —	$ —	$ —	$3,868	$ 650	$(238)	$412	$4,280
Other loans	—	—	—	7	—	7	—	—	—	7
Cash and investments	6	—	—	2	—	8	—	—	—	8
Total interest income	2,118	1,756	—	9	—	3,883	650	(238)	412	4,295
Total interest expense	1,245	680	—	112	—	2,037	37	—	37	2,074
Net interest income (loss)	873	1,076	—	(103)	—	1,846	613	(238)	375	2,221
Less: provisions for loan losses	46	538	—	(3)	—	581	—	—	—	581
Net interest income (loss) after provisions for loan losses	827	538	—	(100)	—	1,265	613	(238)	375	1,640
Other income (loss):										
Servicing revenue	95	21	651	—	(427)	340	—	—	—	340
Asset recovery and business processing revenue	—	—	367	—	—	367	—	—	—	367
Other income	—	—	4	11	—	15	(613)	781	168	183
Gains (losses) on sales of loans and investments	12	(21)	—	—	—	(9)	—	—	—	(9)
Gains on debt repurchases	—	—	—	21	—	21	—	—	—	21
Total other income (loss)	107	—	1,022	32	(427)	734	(613)	781	168	902
Expenses:										
Direct operating expenses	443	168	485	30	(427)	699	—	—	—	699
Overhead expenses	—	—	—	219	—	219	—	—	—	219
Operating expenses	443	168	485	249	(427)	918	—	—	—	918
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	—	12	12	12
Restructuring/other reorganization expenses	—	—	—	—	—	—	—	32	32	32
Total expenses	443	168	485	249	(427)	918	—	44	44	962
Income (loss) from continuing operations, before income tax expense (benefit)	491	370	537	(317)	—	1,081	—	499	499	1,580
Income tax expense (benefit)[(3)]	183	137	199	(118)	—	401	—	196	196	597
Net income (loss) from continuing operations	308	233	338	(199)	—	680	—	303	303	983
Income from discontinued operations, net of tax expense	—	—	—	1	—	1	—	—	—	1
Net income (loss)	$ 308	$ 233	$ 338	$(198)	$ —	$ 681	$ —	$ 303	$303	$ 984

(1) The eliminations in servicing revenue and direct operating expense represent the elimination of intercompany servicing revenue where the Business Services segment performs the loan servicing function for the FFELP Loans segment.

(2) "Core Earnings" adjustments to GAAP:

(Dollars in millions)	Net Impact from Spin-Off of SLM BankCo	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
	Year Ended December 31, 2015			
Net interest income after provisions for loan losses	$ —	$375	$ —	$375
Total other income (loss)	—	168	—	168
Goodwill and acquired intangible asset impairment and amortization	—	—	12	12
Restructuring/other reorganization expenses	32	—	—	32
Total "Core Earnings" adjustments to GAAP	$(32)	$543	$(12)	499
Income tax expense (benefit)				196
Net income (loss)				$303

(3) Income taxes are based on a percentage of net income before tax for the individual reportable segment with the impact of the DTA Remeasurement Loss included in the Other segment.

15. Segment Reporting (Continued)

Summary of "Core Earnings" Adjustments to GAAP

(Dollars in millions)	Years Ended December 31, 2017	2016	2015
"Core Earnings" adjustments to GAAP:			
Net impact of the removal of SLM BankCo's operations and restructuring and reorganization expense in connection with the Spin-Off[1]	$ —	$ —	$ (32)
Net impact of derivative accounting[2]	45	212	543
Net impact of goodwill and acquired intangible assets[3]	(23)	(36)	(12)
Net tax effect[4]	19	(82)	(196)
Total "Core Earnings" adjustments to GAAP	$ 41	$ 94	$ 303

(1) **SLM BankCo's operations and restructuring and other reorganization expense in connection with the Spin-Off:** For "Core Earnings," we have assumed the consumer banking business (SLM BankCo) was never a part of Navient's historical results prior to the deemed distribution of SLM BankCo on April 30, 2014 and we have removed the restructuring and other reorganization expense incurred in connection with the Spin-Off, including the restructuring expenses related to the restructuring initiative launched in second-quarter 2015 to simplify and streamline the Company's management structure post-Spin-Off. Excluding these items provides management with a useful basis from which to better evaluate results from ongoing operations against results from prior periods.

(2) **Derivative accounting:** "Core Earnings" exclude periodic unrealized gains and losses that are caused by the mark-to-market valuations on derivatives that do not qualify for hedge accounting treatment under GAAP as well as the periodic unrealized gains and losses that are a result of ineffectiveness recognized related to effective hedges under GAAP. These unrealized gains and losses occur in our FFELP Loans, Private Education Loans and Other business segments. Under GAAP, for our derivatives that are held to maturity, the cumulative net unrealized gain or loss over the life of the contract will equal $0 except for Floor Income Contracts where the cumulative unrealized gain will equal the amount for which we sold the contract. In our "Core Earnings" presentation, we recognize the economic effect of these hedges, which generally results in any net settlement cash paid or received being recognized ratably as an interest expense or revenue over the hedged item's life.

(3) **Goodwill and acquired intangible assets:** Our "Core Earnings" exclude goodwill and intangible asset impairment and amortization of acquired intangible assets.

(4) **Net Tax Effect:** Such tax effect is based upon our "Core Earnings" effective tax rate for the year.

16. Quarterly Financial Information (unaudited)

(Dollars in millions, except per share data)	2017 First Quarter	2017 Second Quarter	2017 Third Quarter	2017 Fourth Quarter
Net interest income	$340	$351	$355	$366
Less: provisions for loan losses	107	105	105	109
Net interest income after provisions for loan losses	233	246	250	257
Other income	168	187	238	181
Gains (losses) on derivative and hedging activities, net	(16)	(25)	25	38
Operating expenses	238	230	238	260
Goodwill and acquired intangible asset impairment and amortization expense	6	6	6	5
Restructuring/other reorganization expenses	—	—	—	29
Income tax expense	53	60	93	266
Net income (loss) attributable to Navient Corporation	$ 88	$112	$176	$ (84)
Basic earnings (loss) per common share attributable to Navient Corporation	$ .31	$ .40	$ .65	$(.32)
Diluted earnings (loss) per common share attributable to Navient Corporation	$ .30	$ .39	$ .64	$(.32)

(Dollars in millions, except per share data)	2016 First Quarter	2016 Second Quarter	2016 Third Quarter	2016 Fourth Quarter
Net interest income	$486	$429	$412	$378
Less: provisions for loan losses	111	110	106	102
Net interest income after provisions for loan losses	375	319	306	276
Other income	159	151	174	218
Gains (losses) on derivative and hedging activities, net	1	(28)	137	6
Operating expenses	247	230	228	246
Goodwill and acquired intangible asset impairment and amortization expense	4	6	12	13
Restructuring/other reorganization expenses	—	—	—	—
Income tax expense	103	81	147	96
Net income attributable to Navient Corporation	$181	$125	$230	$145
Basic earnings per common share attributable to Navient Corporation	$ .53	$ .39	$ .74	$ .49
Diluted earnings per common share attributable to Navient Corporation	$ .53	$ .38	$ .73	$ .48

CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors
Navient Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited Navient Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements), and our report dated February 25, 2019 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

(signed) KPMG LLP

McLean, Virginia
February 25, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors
Navient Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Navient Corporation and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 25, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

(signed) KPMG LLP

We have served as the Company's auditor since 2012.

McLean, Virginia
February 25, 2019

NAVIENT CORPORATION

CONSOLIDATED BALANCE SHEETS
(In millions, except per share amounts)

	December 31, 2018	December 31, 2017
Assets		
FFELP Loans (net of allowance for losses of $76 and $60, respectively)	$ 72,253	$ 81,703
Private Education Loans (net of allowance for losses of $1,201 and $1,297, respectively)	22,245	23,419
Investments		
Available-for-sale	—	2
Other	226	386
Total investments	226	388
Cash and cash equivalents	1,286	1,518
Restricted cash and cash equivalents	3,976	3,128
Goodwill and acquired intangible assets, net	786	810
Other assets	3,404	4,025
Total assets	$ 104,176	$ 114,991
Liabilities		
Short-term borrowings	$ 5,422	$ 4,771
Long-term borrowings	93,519	105,012
Other liabilities	1,688	1,723
Total liabilities	100,629	111,506
Commitments and contingencies		
Equity		
Common stock, par value $0.01 per share; 1.125 billion shares authorized: 445 million and 440 million shares issued, respectively	4	4
Additional paid-in capital	3,145	3,077
Accumulated other comprehensive income (net of tax expense of $35 and $36, respectively)	113	61
Retained earnings	3,218	3,004
Total Navient Corporation stockholders’ equity before treasury stock	6,480	6,146
Less: Common stock held in treasury at cost: 198 million and 177 million shares, respectively	(2,961)	(2,692)
Total Navient Corporation stockholders’ equity	3,519	3,454
Noncontrolling interest	28	31
Total equity	3,547	3,485
Total liabilities and equity	$ 104,176	$ 114,991

Supplemental information — assets and liabilities of consolidated variable interest entities:

	December 31, 2018	December 31, 2017
FFELP Loans	$ 71,921	$ 77,710
Private Education Loans	19,698	20,886
Restricted cash	3,928	3,091
Other assets, net	956	1,160
Short-term borrowings	4,341	2,906
Long-term borrowings	82,738	89,317
Net assets of consolidated variable interest entities	$ 9,424	$ 10,624

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Years Ended December 31,		
	2018	2017	2016
Interest income:			
FFELP Loans	$ 3,027	$ 2,693	$ 2,528
Private Education Loans	1,778	1,634	1,587
Other loans	6	13	9
Cash and investments	97	43	22
Total interest income	4,908	4,383	4,146
Total interest expense	3,668	2,971	2,441
Net interest income	1,240	1,412	1,705
Less: provisions for loan losses	370	426	429
Net interest income after provisions for loan losses	870	986	1,276
Other income (loss):			
Servicing revenue	274	290	304
Asset recovery and business processing revenue	430	475	390
Other income	17	9	7
Gains on sales of loans and investments	—	3	—
Gains (losses) on debt repurchases	19	(3)	1
Gains (losses) on derivative and hedging activities, net	(38)	22	117
Total other income	702	796	819
Expenses:			
Salaries and benefits	507	519	500
Other operating expenses	477	447	451
Total operating expenses	984	966	951
Goodwill and acquired intangible asset impairment and amortization expense	47	23	36
Restructuring/other reorganization expenses	13	29	—
Total expenses	1,044	1,018	987
Income before income tax expense	528	764	1,108
Income tax expense	133	472	427
Net income	$ 395	$ 292	$ 681
Basic earnings per common share	$ 1.52	$ 1.06	$ 2.15
Average common shares outstanding	260	275	316
Diluted earnings per common share	$ 1.49	$ 1.04	$ 2.12
Average common and common equivalent shares outstanding	264	281	322
Dividends per common share	$ .64	$ .64	$ .64

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years Ended December 31,		
	2018	2017	2016
Net income	$ 395	$ 292	$ 681
Other comprehensive income:			
Gains on derivatives	66	89	91
Reclassification adjustments for derivative (gains) losses included in net income (interest expense)	(15)	(1)	(1)
Total gains on derivatives	51	88	90
Income tax expense	(12)	(33)	(33)
Other comprehensive income, net of tax expense	39	55	57
Total comprehensive income	$ 434	$ 347	$ 738

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares			Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Issued	Treasury	Outstanding								
Balance at December 31, 2015	430,561,656	(82,350,868)	348,210,788	$ 4	$ 2,967	$ (51)	$ 2,414	$ (1,425)	$ 3,909	$ 24	$3,933
Comprehensive income:											
Net income	—	—	—	—	—	—	681	—	681	—	681
Other comprehensive income, net of tax	—	—	—	—	—	57	—	—	57	—	57
Total comprehensive income	—	—	—	—	—	—	—	—	738	—	738
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(201)	—	(201)	—	(201)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	(4)	—	(4)	—	(4)
Issuance of common shares	5,476,010	—	5,476,010	—	35	—	—	—	35	—	35
Tax impact of employee stock-based compensation plans	—	—	—	—	(6)	—	—	—	(6)	—	(6)
Stock-based compensation expense	—	—	—	—	26	—	—	—	26	—	26
Common stock repurchased	—	(59,625,325)	(59,625,325)	—	—	—	—	(755)	(755)	—	(755)
Shares repurchased related to employee stock-based compensation plans	—	(3,197,355)	(3,197,355)	—	—	—	—	(43)	(43)	—	(43)
Balance at December 31, 2016	436,037,666	(145,173,548)	290,864,118	$ 4	$ 3,022	$ 6	$ 2,890	$ (2,223)	$ 3,699	$ 24	$3,723

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares			Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Issued	Treasury	Outstanding								
Balance at December 31, 2016	436,037,666	(145,173,548)	290,864,118	$ 4	$ 3,022	$ 6	$ 2,890	$ (2,223)	$ 3,699	$ 24	$3,723
Comprehensive income:											
Net income	—	—	—	—	—	—	292	—	292	—	292
Other comprehensive income, net of tax	—	—	—	—	—	55	—	—	55	—	55
Total comprehensive income	—	—	—	—	—	—	—	—	347	—	347
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(176)	—	(176)	—	(176)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	(2)	—	(2)	—	(2)
Issuance of common shares	3,680,479	—	3,680,479	—	20	—	—	—	20	—	20
Stock-based compensation expense	—	—	—	—	35	—	—	—	35	—	35
Common stock repurchased	—	(29,646,374)	(29,646,374)	—	—	—	—	(440)	(440)	—	(440)
Shares repurchased related to employee stock-based compensation plans	—	(1,847,651)	(1,847,651)	—	—	—	—	(29)	(29)	—	(29)
Noncontrolling interest in Earnest upon acquisition	—	—	—	—	—	—	—	—	—	7	7
Balance at December 31, 2017	439,718,145	(176,667,573)	263,050,572	$ 4	$ 3,077	$ 61	$ 3,004	$ (2,692)	$ 3,454	$ 31	$3,485

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In millions, except share and per share amounts)

	Common Stock Shares			Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Issued	Treasury	Outstanding								
Balance at December 31, 2017	439,718,145	(176,667,573)	263,050,572	$ 4	$ 3,077	$ 61	$ 3,004	$ (2,692)	$ 3,454	$ 31	$ 3,485
Comprehensive income:											
Net income	—	—	—	—	—	—	395	—	395	—	395
Other comprehensive income (loss), net of tax	—	—	—	—	—	39	—	—	39	—	39
Total comprehensive income	—	—	—	—	—	—	—	—	434	—	434
Cash dividends:											
Common stock ($.64 per share)	—	—	—	—	—	—	(166)	—	(166)	—	(166)
Dividend equivalent units related to employee stock-based compensation plans	—	—	—	—	—	—	(2)	—	(2)	—	(2)
Issuance of common shares	5,659,681	—	5,659,681	—	43	—	—	—	43	—	43
Stock-based compensation expense	—	—	—	—	25	—	—	—	25	—	25
Repurchase of common stock:											
Common stock repurchased	—	(13,131,159)	(13,131,159)	—	—	—	—	(160)	(160)	—	(160)
Derivative contract settlement:			—								
Settlement cost, cash	—	(4,312,192)	(4,312,192)	—	—	—	—	(60)	(60)	—	(60)
(Gain)/loss on settlement	—	—	—	—	—	—	—	4	4	—	4
Shares repurchased related to employee stock-based compensation plans	—	(3,829,629)	(3,829,629)	—	—	—	—	(53)	(53)	—	(53)
Purchase of noncontrolling interest	—	—	—	—	—	—	—	—	—	(3)	(3)
Reclassification from adoption of ASU No. 2018-02	—	—	—	—	—	13	(13)	—	—	—	—
Balance at December 31, 2018	445,377,826	(197,940,553)	247,437,273	$ 4	$ 3,145	$ 113	$ 3,218	$ (2,961)	$ 3,519	$ 28	$ 3,547

See accompanying notes to consolidated financial statements.

NAVIENT CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years Ended December 31, 2018	2017	2016
Operating activities			
Net income	$ 395	$ 292	$ 681
Adjustments to reconcile net income to net cash provided by operating activities:			
(Gains) losses on debt repurchases	(19)	3	(1)
Goodwill and acquired intangible asset impairment and amortization expense	47	23	36
Stock-based compensation expense	25	35	26
Mark-to-market (gains)/losses on derivative and hedging activities, net	37	(83)	(328)
Provisions for loan losses	370	426	429
(Increase) in accrued interest receivable	(125)	(29)	(26)
Increase (decrease) in accrued interest payable	58	11	(92)
Decrease in other assets	321	485	628
Increase (decrease) in other liabilities	31	(5)	(6)
Total net cash provided by operating activities	1,140	1,158	1,347
Investing activities			
Education loans acquired	(3,652)	(7,371)	(3,683)
Principal payments on education loans	13,973	14,738	14,923
Other investing activities, net	(76)	(88)	(7)
Proceeds from sales and maturities of other securities	115	23	49
Purchase of subsidiaries, net of cash and restricted cash acquired	—	(184)	—
Total net cash provided by investing activities	10,360	7,118	11,282
Financing activities			
Borrowings collateralized by loans in trust - issued	9,006	8,440	6,691
Borrowings collateralized by loans in trust - repaid	(14,057)	(13,919)	(13,226)
Asset-backed commercial paper conduits, net	(2,833)	(2,363)	(4,002)
Long-term notes issued	495	1,613	1,231
Long-term notes repaid	(2,947)	(1,464)	(2,603)
Other financing activities, net	(162)	(33)	(238)
Common stock repurchased	(220)	(440)	(755)
Common dividends paid	(166)	(176)	(201)
Total net cash used in financing activities	(10,884)	(8,342)	(13,103)
Net increase (decrease) in cash, cash equivalents, restricted cash and restricted cash equivalents	616	(66)	(474)
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of period	4,646	4,712	5,186
Cash, cash equivalents, restricted cash and restricted cash equivalents at end of period	$ 5,262	$ 4,646	$ 4,712
Cash disbursements made (refunds received) for:			
Interest	$ 3,460	$ 2,872	$ 2,301
Income taxes paid	$ 57	$ 157	$ 249
Income taxes received	$ (6)	$ (1)	$ (4)
Reconciliation of the Consolidated Statements of Cash Flows to the Consolidated Balance Sheets:			
Cash and cash equivalents	$ 1,286	$ 1,518	$ 1,253
Restricted cash and restricted cash equivalents	3,976	3,128	3,459
Total cash, cash equivalents, restricted cash and restricted cash equivalents at end of period	$ 5,262	$ 4,646	$ 4,712
Supplemental cash flow information:			
Noncash activity			
Investing activity - Education loans	$ —	$ 1,746	$ —
Operating activity - Other assets acquired and other liabilities assumed, net	$ —	$ 137	$ —
Financing activity - Borrowings assumed in acquisition of education loans	$ —	$ 1,883	$ —

See accompanying notes to consolidated financial statements.

1. Organization and Business

Navient's Business

Navient is a leading provider of education loan management and business processing solutions for education, healthcare, and government clients at the federal, state, and local levels. We help our clients and millions of Americans achieve financial success through services and support. Headquartered in Wilmington, Delaware, Navient also employs team members in western New York, northeastern Pennsylvania, Indiana, Tennessee, Texas, Virginia, Wisconsin, California and other locations.

With a focus on data-driven insights, service, compliance and innovative support, Navient:

- owns $94.5 billion of education loans;
- originates Private Education Loans;
- services and performs asset recovery activities on its own portfolio of education loans, as well as education loans owned by other institutions including the United States Department of Education ("ED"); and
- provides revenue cycle management and business processing services to federal, state and municipal clients, public authorities and healthcare organizations.

2. Significant Accounting Policies

Use of Estimates

Our financial reporting and accounting policies conform to generally accepted accounting principles in the United States of America ("GAAP"). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Uncertain and volatile market and economic conditions increase the risk and complexity of the judgments in these estimates and actual results could differ from estimates. Key accounting policies that include the most significant judgments, estimates and assumptions include the allowance for loan losses, the amortization of loan premiums and discounts using the effective interest rate method, goodwill and intangible asset impairment assessment and fair value measurement.

Consolidation

The consolidated financial statements include the accounts of Navient Corporation and its majority-owned and controlled subsidiaries and those Variable Interest Entities ("VIEs") for which we are the primary beneficiary, after eliminating the effects of intercompany accounts and transactions.

We consolidate any VIEs where we have determined we are the primary beneficiary. A VIE is a legal entity that does not have sufficient equity at risk to finance its own operations, or whose equity holders do not have the power to direct the activities that most significantly affect the economic performance of the entity, or whose equity holders do not share proportionately in the losses or benefits of the entity. The primary beneficiary of the VIE is the entity which has both: (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (2) the obligation to absorb losses or receive benefits of the entity that could potentially be significant to the VIE. As it relates to our securitizations and other secured borrowing facilities that are VIEs as of December 31, 2018, we are the servicer of the related education loan assets and own the Residual Interest of the securitization trusts and secured borrowing facilities. As a result, we are the primary beneficiary and consolidate those VIEs.

2. Significant Accounting Policies (Continued)

Fair Value Measurement

We use estimates of fair value in applying various accounting standards for our financial statements. Fair value measurements are used in one of four ways:

- In the consolidated balance sheet with changes in fair value recorded in the consolidated statement of income;
- In the consolidated balance sheet with changes in fair value recorded in the accumulated other comprehensive income section of the consolidated statement of changes in stockholders' equity;
- In the consolidated balance sheet for instruments carried at lower of cost or fair value with impairment charges recorded in the consolidated statement of income; and
- In the notes to the financial statements.

Fair value is defined as the price to sell an asset or transfer a liability in an orderly transaction between willing and able market participants. In general, our policy in estimating fair value is to first look at observable market prices for identical assets and liabilities in active markets, where available. When these are not available, other inputs are used to model fair value such as prices of similar instruments, yield curves, volatilities, prepayment speeds, default rates and credit spreads, relying first on observable data from active markets. Depending on current market conditions, additional adjustments to fair value may be based on factors such as liquidity and credit spreads. Transaction costs are not included in the determination of fair value. When possible, we seek to validate the model's output to market transactions. Depending on the availability of observable inputs and prices, different valuation models could produce materially different fair value estimates. The values presented may not represent future fair values and may not be realizable.

We categorize our fair value estimates based on a hierarchical framework associated with three levels of price transparency utilized in measuring financial instruments at fair value. Classification is based on the lowest level of input that is significant to the fair value of the instrument. The three levels are as follows:

- Level 1 — Quoted prices (unadjusted) in active markets for identical assets or liabilities that we have the ability to access at the measurement date. The types of financial instruments included in level 1 are highly liquid instruments with quoted prices.
- Level 2 — Inputs from active markets, other than quoted prices for identical instruments, are used to determine fair value. Significant inputs are directly observable from active markets for substantially the full term of the asset or liability being valued.
- Level 3 — Pricing inputs significant to the valuation are unobservable. Inputs are developed based on the best information available. However, significant judgment is required by us in developing the inputs.

Loans

Loans, consisting primarily of federally insured education loans and Private Education Loans, that we have the ability and intent to hold for the foreseeable future are classified as held-for-investment and are carried at amortized cost. Amortized cost includes the unamortized premiums, discounts, and capitalized origination costs and fees, all of which are amortized to interest income as further discussed below. Loans which are held-for-investment also have an allowance for loan loss as needed. Any loans we have not classified as held-for-investment are classified as held-for-sale and carried at the lower of cost or fair value. Loans are classified as held-for-sale when we have the intent and ability to sell such loans. Loans which are held-for-sale do not have the associated premium, discount, and capitalized origination costs and fees amortized into interest income. In addition, once a loan is classified as held-for-sale, there is no further adjustment to the loan's allowance for loan losses that existed immediately prior to the reclassification to held-for-sale.

2. Significant Accounting Policies (Continued)

Allowance for Loan Losses

Purchased Credit Impaired ("PCI") Loans

Loans acquired with evidence of deterioration of credit quality since origination for which it is probable, at acquisition, that the investor will be unable to collect all contractually required payments receivable are PCI loans accounted for under Accounting Standard Codification ("ASC") 310-30, "Loans and Debt Securities Acquired with Deteriorated Credit Quality." When considering whether evidence of credit quality deterioration exists as of the purchase date, the Company considers loan guarantees and the following credit attributes: delinquency status, use of forbearance, recent borrower FICO scores, use of loan modification programs, and borrowers who have filed for bankruptcy.

The Company aggregates loans with common risk characteristics into pools and accounts for each pool as a single asset with a single composite interest rate and an aggregate expectation of cash flows. The pools are initially recorded at fair value. The Company recognizes interest income based on each pool's effective interest rate which is based on our estimate of all cash flows expected to be received and includes an assumption about prepayment rates. The pools are tested quarterly for impairment by re-estimating the future cash flows to be received from the pools. If the new estimated cash flows result in a pool's effective interest rate increasing, then this new yield is used prospectively over the remaining life of the pool. If the new estimated cash flows result in a pool's effective interest rate decreasing, the pool is impaired and written down through a valuation allowance to maintain the effective interest rate. Loans classified as PCI do not have charge-offs reported nor are they reported as Trouble Debt Restructuring ("TDR") loans.

Based on the credit attributes discussed above, we determined that $261 million principal amount of Private Education Loans acquired in 2017 are accounted for as PCI loans with a fair value and resulting carry value of $101 million as of the acquisition date. As of acquisition, this portfolio's contractually required payments receivable (the total undiscounted amount of all uncollected contractual principal and interest payments both past due and scheduled for the future, adjusted for prepayments) was $411 million with an estimated accretable yield (income expected to be recognized in future periods) of $108 million. As of December 31, 2018, the carrying amount was $82 million with no valuation allowance recorded.

Purchased Non-Credit Impaired Loans

Loans acquired that do not have evidence of credit deterioration since origination are recorded at fair value with no allowance for loan losses established at the acquisition date. Loan premiums and discounts are amortized as a part of interest income using the interest method under ASC 310-20, "Nonrefundable Fees and Other Costs." An allowance for loan losses would be established if incurred losses in the loans exceed the remaining unamortized discount recorded at the time of acquisition (i.e., the next two years of expected charge-offs as well as any additional TDR allowance required is greater than the remaining discount). As a result of this policy, to the extent that actual charge-offs exceed any related allowance for loan losses recognized post-acquisition, provision for loan losses is recorded when the loans are charged off. Charge-offs are recorded through the allowance for loan losses. In 2017, we acquired Private Education Loans with an unpaid principal balance of $2.8 billion at a discount of $424 million and FFELP Loans with an unpaid principal balance of $3.5 billion at a discount of $47 million, that are accounted for under this policy. No allowance for loan losses has been established for these loans as of December 31, 2018, as the remaining purchased discount associated with the Private Education Loans of $326 million and FFELP Loans of $37 million as of December 31, 2018 remains greater than the incurred losses.

Allowance for Private Education Loan Losses

We consider a loan to be impaired when, based on current information, a loss has been incurred and it is probable that we will not receive all contractual amounts due. When making our assessment as to whether a loan is impaired, we also take into account more than insignificant delays in payment. We generally evaluate impaired loans on an aggregate basis by grouping similar loans. Impaired loans also include those loans which are individually assessed for impairment at a loan level, such as in a troubled debt restructuring ("TDR"). We maintain an allowance for loan losses at an amount sufficient to absorb losses incurred in our portfolios at the reporting date based on a projection of estimated probable credit losses incurred in the portfolio.

2. Significant Accounting Policies (Continued)

Our Private Education Loan portfolio contains TDR and non-TDR loans. For customers experiencing financial difficulty, certain Private Education Loans for which we have granted a forbearance of greater than three months, an interest rate reduction or an extended repayment plan are classified as TDRs. The allowance requirements are different based on these designations. In determining the allowance for loan losses on our non-TDR portfolio, we estimate the principal amount of loans that will default over the next two years (two years being the expected period between a loss event and default) and how much we expect to recover over time related to the defaulted amount. Expected defaults less our expected recoveries equal the allowance related to this portfolio. Our historical experience indicates that, on average, the time between the date that a customer experiences a default causing event (i.e., the loss trigger event) and the date that we charge off the unrecoverable portion of that loan is two years. Separately, for our TDR portfolio, we estimate an allowance amount sufficient to cover life-of-loan expected losses through an impairment calculation based on the difference between the loan's basis and the present value of expected future cash flows (which would include life-of-loan default and recovery assumptions) discounted at the loan's original effective interest rate. Our TDR portfolio is comprised mostly of loans with forbearance usage greater than three months and interest rate reductions. The separate allowance estimates for our TDR and non-TDR portfolios are combined into our total allowance for Private Education Loan losses.

In estimating both the non-TDR and TDR allowance amounts, we start with historical experience of customer default behavior. We make judgments about which historical period to start with and then make further judgments about whether that historical experience is representative of future expectations and whether additional adjustments may be needed to those historical default rates. We also take the economic environment into consideration when calculating the allowance for loan losses. We analyze key economic statistics and the effect we expect them to have on future defaults. Key economic statistics analyzed as part of the allowance for loan losses are primarily unemployment rates. Our allowance for loan losses is estimated using an analysis of delinquent and current accounts. Our model is used to estimate the likelihood that a loan may progress through the various delinquency stages and ultimately charge off. The evaluation of the allowance for loan losses is inherently subjective, as it requires material estimates that may be susceptible to significant changes. The estimate for the allowance for loan losses is subject to a number of assumptions. If actual future performance in delinquency, charge-offs and recoveries are significantly different than estimated, this could materially affect our estimate of the allowance for loan losses and the related provision for loan losses on our income statement.

We determine the collectability of our Private Education Loan portfolio by evaluating certain risk characteristics. We consider school type, credit score (FICO), existence of a cosigner, loan status and loan seasoning as the key credit quality indicators because they have the most significant effect on our determination of the adequacy of our allowance for loan losses. The type of school customers attend can have an impact on their graduation rate and job prospects after graduation and therefore affects their ability to make payments. Credit scores are an indicator of the credit worthiness of a customer and the higher the credit score the more likely it is the customer will be able to make all of their contractual payments. Loan status affects the credit risk because a past due loan is more likely to result in a credit loss than an up-to-date loan. Additionally, loans in a deferred payment status have different credit risk profiles compared with those in current payment status. Of the portfolio in repayment, loan seasoning is an important factor. It affects credit risk because a loan with a history of making payments generally has a lower incidence of default than a loan with a history of making infrequent or no payments. The existence of a cosigner lowers the likelihood of default. We monitor and update these credit quality indicators in the analysis of the adequacy of our allowance for loan losses on a quarterly basis.

To estimate the probable credit losses incurred in the loan portfolio at the reporting date, we use historical experience of customer payment behavior in connection with the key credit quality indicators and incorporate management expectations regarding macroeconomic and collection performance factors. Our model is based upon the most recent twelve months of actual collection experience as the starting point for the non-TDR portfolio and the most recent approximate 15 years for the TDR portfolio and applies expected macroeconomic changes and collection procedure changes to estimate expected losses caused by loss events incurred as of the balance sheet date. Our model for the non-TDR portfolio places a greater emphasis on the more recent default experience rather than the default experience for older historical periods, as we believe the more recent default experience is more indicative of the probable losses incurred in the loan portfolio today that will default over the next two years. The TDR portfolio uses a longer historical default experience since we are projecting life of loan remaining losses. Similar to estimating defaults, we use historical customer payment behavior to estimate the timing and amount of future recoveries on charged-off loans. We use judgment in determining whether historical performance is

2. Significant Accounting Policies (Continued)

representative of what we expect to collect in the future. We then apply the default and collection rate projections to each category of loans. Once the quantitative calculation is performed, we review the adequacy of the allowance for loan losses and determine if qualitative adjustments need to be considered. Additionally, we consider changes in laws and regulations that could potentially impact the allowance for loan losses.

Our collection policies allow for periods of nonpayment for customers requesting additional payment grace periods upon leaving school or experiencing temporary difficulty meeting payment obligations. This is referred to as forbearance status and is considered in our allowance for loan losses. The loss confirmation period is in alignment with our typical collection cycle and takes into account these periods of nonpayment.

Our allowance for Private Education Loan losses also provides for possible additional future charge-offs as they occur related to the receivable for partially charged-off Private Education Loans. At the end of each month, for loans that are 212 days past due, we charge off the estimated loss of a defaulted loan balance. Actual recoveries are applied against the remaining loan balance that was not charged off. We refer to this remaining loan balance as the "receivable for partially charged-off loans." If actual periodic recoveries are less than expected, the difference is immediately charged off through the allowance for loan losses with an offsetting reduction in the receivable for partially charged-off Private Education Loans. If actual periodic recoveries are greater than expected, they will be reflected as a recovery through the allowance for Private Education Loan losses once the cumulative recovery amount exceeds the cumulative amount originally expected to be recovered.

Allowance for FFELP Loan Losses

FFELP Loans are insured as to their principal and accrued interest in the event of default subject to a Risk Sharing level based on the date of loan disbursement. These insurance obligations are supported by contractual rights against the United States. For loans disbursed after October 1, 1993, and before July 1, 2006, we receive 98 percent reimbursement on all qualifying default claims. For loans disbursed on or after July 1, 2006, we receive 97 percent reimbursement. For loans disbursed prior to October 1, 1993, we receive 100 percent reimbursement.

Similar to the allowance for Private Education Loan losses, the allowance for FFELP Loan losses uses historical experience of customer default behavior and a two-year loss confirmation period to estimate the credit losses incurred in the loan portfolio at the reporting date. We apply the default rate projections, net of applicable Risk Sharing, to each category for the current period to perform our quantitative calculation. Once the quantitative calculation is performed, we review the adequacy of the allowance for loan losses and determine if qualitative adjustments need to be considered. For FFELP Loans that have lost their government insurance and have been charged off, any subsequent cash recoveries benefit the allowance for loan losses when received.

Investments

Our available-for-sale investment portfolio consists of investments that are carried at fair value, with the temporary changes in fair value carried as a separate component of stockholders' equity, net of taxes. The amortized cost of debt securities in this category is adjusted for the amortization of related premiums and discounts, which are amortized using the effective interest rate method. Other-than-temporary impairment is evaluated by considering several factors, including the length of time and extent to which the fair value has been less than the amortized cost basis, the financial condition and near-term prospects of the security (considering factors such as adverse conditions specific to the security and ratings agency actions), and the intent and ability to retain the investment to allow for an anticipated recovery in fair value. The entire fair value loss on a security that is other-than-temporary impairment is recorded in earnings if we intend to sell the security or if it is more likely than not that we will be required to sell the security before the expected recovery of the loss. However, if the impairment is other-than-temporary, and those two conditions do not exist, the portion of the impairment related to credit losses is recorded in earnings and the impairment related to other factors is recorded in other comprehensive income. Securities classified as trading are accounted for at fair value with unrealized gains and losses included in investment income. Securities that we have the intent and ability to hold to maturity are classified as held-to-maturity and are accounted for at amortized cost unless the security is determined to have an other-than-temporary impairment. In this case it is accounted for in the same manner described above.

2. Significant Accounting Policies (Continued)

We also have other investments, primarily a receivable for cash collateral posted to derivative counterparties.

Cash and Cash Equivalents

Cash and cash equivalents can include term federal funds, Eurodollar deposits, commercial paper, asset-backed commercial paper, CDs, treasuries and money market funds with original terms to maturity of less than three months.

Restricted Cash and Investments

Restricted cash primarily includes amounts held in education loan securitization trusts and other secured borrowings. This cash must be used to make payments related to trust obligations. Amounts on deposit in these accounts are primarily the result of timing differences between when principal and interest is collected on the trust assets and when principal and interest is paid on trust liabilities.

Securities pledged as collateral related to our derivative portfolio, where the counterparty has rights to replace the securities, are classified as restricted. When the counterparty does not have these rights, the security is recorded in investments and disclosed as pledged collateral in the notes. Additionally, certain counterparties require cash collateral pledged to us to be segregated and held in restricted cash accounts.

Goodwill and Acquired Intangible Assets

Goodwill is not amortized but is tested periodically for impairment. We test goodwill for impairment annually as of October 1 at the reporting unit level, which is the same as or one level below a business segment. Goodwill is also tested at interim periods if an event occurs or circumstances change that would indicate the carrying amount may be impaired.

We complete a goodwill impairment analysis which may be a qualitative or a quantitative two-step analysis depending on the facts and circumstances associated with the reporting unit. In conjunction with a qualitative impairment analysis, we assess relevant qualitative factors to determine whether it is "more-likely-than-not" that the fair value of a reporting unit is less than its carrying amount. The "more-likely-than-not" threshold is defined as having a likelihood of more than 50 percent. In conjunction with a quantitative impairment analysis, we complete Step 1 of the goodwill impairment analysis. Step 1 consists of a comparison of the fair value of the reporting unit to the reporting unit's carrying value, including goodwill. If the carrying value of the reporting unit exceeds the fair value, Step 2 in the goodwill impairment analysis is performed to measure the amount of impairment loss, if any. Step 2 of the goodwill impairment analysis compares the implied fair value of the reporting unit's goodwill to the carrying value of the reporting unit's goodwill. The implied fair value of goodwill is determined in a manner consistent with determining goodwill in a business combination. If the carrying amount of the reporting unit's goodwill exceeds the implied fair value of the goodwill, an impairment loss is recognized in an amount equal to that excess. If, based on first assessing impairment utilizing a qualitative approach, we determine it is "more-likely-than-not" that the fair value of the reporting unit is less than its carrying amount, we will also complete a quantitative impairment analysis.

Acquired intangible assets include, but are not limited to, trade names, customer and other relationships, and non-compete agreements. Acquired intangible assets with finite lives are amortized over their estimated useful lives in proportion to their estimated economic benefit. Finite-lived acquired intangible assets are reviewed for impairment using an undiscounted cash flow analysis when an event occurs or circumstances change indicating the carrying amount of a finite-lived asset or asset group may not be recoverable. If the carrying amount of the asset or asset groups exceeds the undiscounted cash flows, the fair value of the asset or asset group is determined using an acceptable valuation technique. An impairment loss would be recognized if the carrying amount of the asset (or asset group) exceeds the fair value of the asset or asset group. The impairment loss recognized would be the difference between the carrying amount and fair value. Indefinite-life acquired intangible assets are not amortized. We test these indefinite-life acquired intangible assets for impairment annually as of October 1 or at interim periods if an event occurs or circumstances change that would indicate the carrying value of these assets may be impaired. The annual or interim impairment test of indefinite-life acquired intangible assets is based primarily on a discounted cash flow analysis.

2. Significant Accounting Policies (Continued)

Securitization Accounting

Our securitizations use a two-step structure with a special purpose entity that legally isolates the transferred assets from us, even in the event of bankruptcy. Transactions receiving sale treatment are also structured to ensure that the holders of the beneficial interests issued are not constrained from pledging or exchanging their interests, and that we do not maintain effective control over the transferred assets. If these criteria are not met, then the transaction is accounted for as an on-balance sheet secured borrowing. In all cases, irrespective of whether they qualify as accounting sales our securitizations are legally structured to be sales of assets that isolate the transferred assets from us. If a securitization qualifies as a sale, we then assess whether we are the primary beneficiary of the securitization trust (VIE) and are required to consolidate such trust. If we are the primary beneficiary, then no gain or loss is recognized. See "Consolidation" of this Note 2 for additional information regarding the accounting rules for consolidation when we are the primary beneficiary of these trusts.

Irrespective of whether a securitization receives sale or on-balance sheet treatment, our continuing involvement with our securitization trusts is generally limited to:

- Owning equity certificates or other certificates of certain trusts and, in certain cases, securities retained for the purpose of complying with risk retention requirements under securities laws.
- Lending to certain trusts, under a revolving credit, amounts necessary to cover temporary cash flow needs of the trust. These amounts are repaid to us on subordinated basis with interest at a market rate.
- The servicing of the education loan assets within the securitization trusts, on both a pre- and post-default basis.
- Our acting as administrator for the securitization transactions we sponsored, which includes remarketing certain bonds at future dates.
- Our responsibilities relative to representation and warranty violations.
- Temporarily advancing to the trust certain borrower benefits afforded the borrowers of education loans that have been securitized. These advances subsequently are returned to us in the next quarter.
- Certain back-to-back derivatives entered into by us contemporaneously with the execution of derivatives by certain Private Education Loan securitization trusts.
- The option held by us to buy certain delinquent loans from certain Private Education Loan securitization trusts.
- The option to exercise the clean-up call and purchase the education loans from the trust when the asset balance is 10 percent or less of the original loan balance.
- The option, on some trusts, to purchase education loans aggregating up to 10 percent of the trust's initial pool balance.
- The option (in certain trusts) to call rate reset notes in instances where the remarketing process has failed.

The investors of the securitization trusts have no recourse to our other assets should there be a failure of the trusts to pay when due. Generally, the only arrangements under which we have to provide financial support to the trusts are representation and warranty violations requiring the buyback of loans.

Under the terms of the transaction documents of certain trusts, we have, from time to time, exercised our options to purchase delinquent loans from Private Education Loan trusts, to purchase the remaining loans from trusts once the loan balance falls below 10 percent of the original amount, to purchase education loans up to 10 percent of the trust's initial balance, or to call rate reset notes. Certain trusts maintain financial arrangements with third parties also typical of securitization transactions, such as derivative contracts (swaps) and bond insurance policies that, in the case of a counterparty failure, could adversely impact the value of any Residual Interest.

2. Significant Accounting Policies (Continued)

We do not record servicing assets or servicing liabilities when our securitization trusts are accounted for as on-balance sheet secured financings. As of December 31, 2018, we have $19 million of servicing assets on our balance sheet, of which $9 million is related to Residual Interests in FFELP Loan securitization trusts we sold in 2013 and $10 million is related to the acquisition of Earnest in 2017.

Education Loan Interest Income

For loans classified as held-for-investment, we recognize education loan interest income as earned, adjusted for the amortization of premiums (which includes purchased premiums and capitalized direct origination costs), discounts and Repayment Borrower Benefits. These adjustments result in income being recognized based upon the expected yield of the loan over its life after giving effect to expected prepayments. We amortize premium and discount on education loans using a Constant Prepayment Rate ("CPR") which measures the rate at which loans in the portfolio pay down principal compared to their stated terms. In determining the CPR, we only consider payments made in excess of contractually required payments. This would include loan consolidation and other early payoff activity. For Repayment Borrower Benefits, the estimates of their effect on education loan yield are based on analyses of historical payment behavior of customers who are eligible for the incentives and its effect on the ultimate qualification rate for these incentives. We regularly evaluate the assumptions used to estimate the prepayment speeds and the qualification rates used for Repayment Borrower Benefits. In instances where there are changes to the assumptions, amortization is adjusted on a cumulative basis to reflect the change since the acquisition of the loan. Additionally, interest earned on education loans reflects potential non-payment adjustments in accordance with our uncollectible interest recognition policy. We do not amortize any premiums, discounts or other adjustments to the basis of education loans when they are classified as held-for-sale. See "Allowance for Loan Losses – Purchased Credit Impaired ('PCI') Loans" and "–Purchased Non-Credit Impaired Loans" of this Note 2 for discussion of the interest income methodology related to those portfolios.

Interest Expense

Interest expense is based upon contractual interest rates adjusted for the amortization of debt issuance costs, premiums and discounts. Our interest expense may also be adjusted for net payments/receipts related to interest rate and foreign currency swap agreements that qualify and are designated as hedges. Interest expense also includes the amortization of deferred gains and losses on closed hedge transactions that qualified as hedges. Amortization of debt issuance costs, premiums, discounts and terminated hedge-basis adjustments are recognized using the effective interest rate method.

Servicing Revenue

We perform loan servicing functions for third-parties in return for a servicing fee. Our compensation is typically based on a per-unit fee arrangement or a percentage of the loans outstanding. We recognize servicing revenues associated with these activities based upon the contractual arrangements as the services are rendered. We recognize late fees on third-party serviced loans as well as on loans in our portfolio according to the contractual provisions of the promissory notes, as well as our expectation of collectability.

Asset Recovery and Business Processing Revenue

Asset recovery fees are received for collections or rehabilitation of delinquent or defaulted debt on behalf of clients performed on a contingency basis. Revenue is earned and recognized upon the completion of rehabilitation activities or upon receipt of the delinquent customer funds.

Prior to the third quarter of 2018, we received fees from Guarantor agencies for performing default aversion services on delinquent loans prior to default. The fee is received when the loan is initially placed with us and we are obligated to provide such services for the remaining life of the loan for no additional fee. In the event that the loan defaults, in accordance with certain contracts, we are obligated to rebate a portion of the fee to the Guarantor agency in proportion to the principal and interest outstanding when the loan defaults. We defer the fees received, net of an estimate of future rebates owed due to subsequent defaults, and recognize such fees over the service period which is estimated to be the life of the loan.

2. Significant Accounting Policies (Continued)

In the third quarter of 2017, $47 million of previously deferred asset recovery revenue, net of a reserve, was recognized as revenue related to loans for which the Company performs these default aversion services. In the third quarter of 2017, the Company was notified that it would no longer perform these services after 2017 due to the termination of the related contract as of December 31, 2017. In accordance with GAAP, we recognized this previously deferred revenue during the third-quarter 2017 to reflect a shortened period over which it is expected to be earned.

Business processing fees are received generally based on processing transactions. Revenue is earned and recognized upon the completion of processing the transaction and in some cases also upon the processing of a payment.

Transfer of Financial Assets and Extinguishments of Liabilities

We account for loan sales and debt repurchases in accordance with the applicable accounting guidance. Our securitizations and other secured borrowings are accounted for as on-balance sheet secured borrowings. See "Securitization Accounting" of this Note 2 for further discussion on the criteria assessed to determine whether a transfer of financial assets is a sale or a secured borrowing. If a transfer of loans qualifies as a sale, we derecognize the loan and recognize a gain or loss as the difference between the carrying basis of the loan sold and liabilities retained and the compensation received.

We periodically repurchase our outstanding debt in the open market or through public tender offers. We record a gain or loss on the early extinguishment of debt based upon the difference between the carrying cost of the debt and the amount paid to the third party and is net of hedging gains and losses when the debt is in a qualifying hedge relationship.

We recognize the results of a transfer of loans and the extinguishment of debt based upon the settlement date of the transaction.

Derivative Accounting

The accounting guidance for our derivative instruments, which primarily includes interest rate swaps, cross-currency interest rate swaps and Floor Income Contracts, requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded at fair value on the balance sheet as either an asset or liability. Derivative positions are recorded as net positions by counterparty based on master netting arrangements exclusive of accrued interest and cash collateral held or pledged.

Many of our derivatives, mainly fixed to variable or variable to fixed interest rate swaps and cross-currency interest rate swaps, qualify as effective hedges. For these derivatives, the relationship between the hedging instrument and the hedged items (including the hedged risk and method for assessing effectiveness), as well as the risk management objective and strategy for undertaking various hedge transactions at the inception of the hedging relationship, is documented. Each derivative is designated to either a specific (or pool of) asset(s) or liability(ies) on the balance sheet or expected future cash flows and designated as either a "fair value" or a "cash flow" hedge. Fair value hedges are designed to hedge our exposure to changes in fair value of a fixed rate or foreign denominated asset or liability, while cash flow hedges are designed to hedge our exposure to variability of either a floating rate asset's or liability's cash flows or an expected fixed rate debt issuance. For effective fair value hedges, both the derivative and the hedged item (for the risk being hedged) are marked-to-market with any difference reflecting ineffectiveness and recorded immediately in the statement of income. For effective cash flow hedges, the change in the fair value of the derivative is recorded in other comprehensive income, net of tax, and recognized in earnings in the same period as the earnings effects of the hedged item. The ineffective portion of a cash flow hedge is recorded immediately through earnings. The assessment of the hedge's effectiveness is performed at inception and on an ongoing basis, generally using regression testing. For hedges of a pool of assets or liabilities, tests are performed to demonstrate the similarity of individual instruments of the pool. When it is determined that a derivative is not currently an effective hedge, ineffectiveness is recognized for the full change in value of the derivative with no offsetting mark-to-market of the hedged item for the current period. If it is also determined the hedge will not be effective in the future, we discontinue the hedge accounting prospectively, cease recording changes in the fair value of the hedged item, and begin amortization of any basis adjustments that exist related to the hedged item.

2. Significant Accounting Policies (Continued)

We also have derivatives, primarily Floor Income Contracts and certain basis swaps, that we believe are effective economic hedges but do not qualify for hedge accounting treatment. These derivatives are classified as “trading” and as a result they are marked-to-market through earnings with no consideration for the fair value fluctuation of the economically hedged item.

The “gains (losses) on derivative and hedging activities, net” line item in the consolidated statements of income includes the mark-to-market gains and losses of our derivatives (except effective cash flow hedges which are recorded in other comprehensive income), the unrealized changes in fair value of hedged items in qualifying fair value hedges, as well as the realized changes in fair value related to derivative net settlements and dispositions that do not qualify for hedge accounting. Net settlement income/expense on derivatives that qualify as hedges are included with the income or expense of the hedged item (mainly interest expense).

Accounting for Stock-Based Compensation

We recognize stock-based compensation cost in our consolidated statements of income using the fair value based method. Under this method we determine the fair value of the stock-based compensation at the time of the grant and recognize the resulting compensation expense over the grant’s vesting period. We record stock-based compensation expense net of estimated forfeitures and as such, only those stock-based awards that we expect to vest are recorded. We estimate the forfeiture rate based on historical forfeitures of equity awards and adjust the rate to reflect changes in facts and circumstances, if any. Ultimately, the total expense recognized over the vesting period will equal the fair value of awards that actually vest.

Restructuring and Other Reorganization Expenses

From time to time we implement plans to restructure our business. In conjunction with these restructuring plans, involuntary benefit arrangements, disposal costs (including contract termination costs and other exit costs), as well as certain other costs that are incremental and incurred as a direct result of our restructuring plans, are classified as restructuring expenses in the consolidated statements of income.

The Company administers the Navient Corporation Employee Severance Plan and the Navient Corporation Executive Severance Plan for Senior Officers (collectively, “the Severance Plan”). The Severance Plan provides severance benefits in the event of termination of the Company’s full-time employees and part-time employees who work at least 24 hours per week. The Severance Plan establishes specified benefits based on base salary, job level immediately preceding termination and years of service upon involuntary termination of employment. The benefits payable under the Severance Plan relate to past service, and they accumulate and vest. Accordingly, we recognize severance expenses to be paid pursuant to the Severance Plan when payment of such benefits is probable and can be reasonably estimated in accordance with ASC 712, “Compensation — Nonretirement Postemployment Benefits.” Such benefits, include severance pay calculated based on the Severance Plan, medical and dental benefits, and outplacement services expenses.

Contract termination costs are expensed at the earlier of (1) the contract termination date or (2) the cease use date under the contract. Other exit costs are expensed as incurred and classified as restructuring expenses if (1) the cost is incremental to and incurred as a direct result of planned restructuring activities and (2) the cost is not associated with or incurred to generate revenues subsequent to our consummation of the related restructuring activities.

Other reorganization expenses include certain internal costs and third-party costs incurred in connection with our cost reduction initiatives.

During 2018 and 2017, the Company incurred \$13 million and \$29 million, respectively, of restructuring/other reorganization expense in connection with an effort that will reduce costs and improve operating efficiency. These charges were due primarily to severance-related costs.

2. Significant Accounting Policies (Continued)

Income Taxes

We account for income taxes under the asset and liability approach which requires the recognition of deferred tax liabilities and assets for the expected future tax consequences of temporary differences between the carrying amounts and tax basis of our assets and liabilities. To the extent tax laws change, deferred tax assets and liabilities are adjusted in the period that the tax change is enacted. See “Note 14 – Income Taxes” for a description of the impact of the “Tax Cuts and Jobs Act” (“TCJA”) on the net deferred tax asset as of December 31, 2017.

“Income tax expense/(benefit)” includes (i) deferred tax expense/(benefit), which represents the net change in the deferred tax asset or liability balance during the year plus any change in a valuation allowance and (ii) current tax expense/(benefit), which represents the amount of tax currently payable to or receivable from a tax authority plus amounts accrued for unrecognized tax benefits. Income tax expense/(benefit) excludes the tax effects related to adjustments recorded in equity.

If we have an uncertain tax position, then that tax position is recognized only if it is more likely than not to be sustained upon examination based on the technical merits of the position. The amount of tax benefit recognized in the financial statements is the largest amount of benefit that is more than 50 percent likely of being sustained upon ultimate settlement of the uncertain tax position. We recognize interest related to unrecognized tax benefits in income tax expense/(benefit) and penalties, if any, in operating expenses.

Earnings (Loss) per Common Share

We compute earnings (loss) per common share (“EPS”) by dividing net income allocated to common shareholders by the weighted average common shares outstanding. Net income allocated to common shareholders represents net income applicable to common shareholders. Diluted earnings per common share is computed by dividing income allocated to common shareholders by the weighted average common shares outstanding plus amounts representing the dilutive effect of stock options outstanding, restricted stock, restricted stock units, and the outstanding commitment to issue shares under the Employee Stock Purchase Plan. See “Note 10 — Earnings (Loss) per Common Share” for further discussion.

Reclassifications

Certain reclassifications have been made to the balances as of and for the years ended December 31, 2017 and 2016, to be consistent with classifications adopted for 2018, which had no effect on net income, total assets or total liabilities.

Recently Issued Accounting Pronouncements

Effective in 2018

Revenue Recognition

On January 1, 2018, we adopted Accounting Standard Codification (“ASC”) 606, “Revenue from Contracts with Customers,” which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to its customers. The contract transaction price is allocated to each distinct contractual performance obligation and recognized as revenue at a point in time or over time when or as the good or service is provided to the customer and the performance obligation is satisfied. Generally, our performance obligations are satisfied over time. In conjunction with our implementation plan, we identified revenue streams related to asset recovery and other business processing within our Federal Education Loans and Business Processing segments that are within the scope of the new standard and reviewed related contracts. We determined there was no material change in the timing of our recognition of our asset recovery and business processing revenue or expenses and we did not record a cumulative adjustment as of January 1, 2018 as a result of the adoption of ASC 606. We recognized $8 million of revenue and $5 million of expenses in 2018 related to a contract in our Business Processing segment that would not have been recognized under the prior accounting standard until 2019.

2. Significant Accounting Policies (Continued)

The new guidance does not apply to financial instruments and transfers and servicing that are accounted for under other GAAP. Accordingly, the new revenue recognition guidance does not have an impact on our recognition of revenue and costs associated with our loan portfolios, investments, derivatives and servicing contracts. However, we considered the ASC 606 principal versus agent guidance with respect to certain asset recovery guarantor servicing contracts pursuant to which we serve in a portfolio management role and use third-party collection agencies. We determined that we are required under the new accounting standard to reflect the revenue earned and paid to third-party collection agencies as revenue and operating expense. Under the prior accounting standards, we netted payments to third-party collection agencies against revenue. We adopted the new accounting standard using the "cumulative effect transition adjustment" which results in prospectively making this change in 2018. This change in accounting policy resulted in both asset recovery revenue and operating expense in the Federal Education Loan segment being $46 million higher for the year ended December 31, 2018, with no impact on net income. See "Note 15 – Revenue from Contracts with Customers Accounted in Accordance with ASC 606" for the new required disclosures.

Classification and Measurement

On January 5, 2016, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Updates ("ASU") No. 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities," which reconsiders the classification and measurement of financial instruments. The new standard requires certain equity instruments be measured at fair value, with fair value changes recognized in earnings. In addition, the standard requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption. It was effective for the Company as of January 1, 2018. The adoption of this new accounting standard is immaterial to our consolidated financial statements and footnote disclosures.

Intra-Entity Transfer of Assets

On October 24, 2016, the FASB issued ASU No. 2016-16, "Income Taxes — Intra-Entity Transfer of Assets Other and Inventory," which requires recognition of the income tax consequences of an intra-entity transfer of non-inventory assets when the transfer occurs. The new standard was effective for the Company as of January 1, 2018. The adoption of this new accounting standard is immaterial to our consolidated financial statements and footnote disclosures.

Income Taxes

On February 14, 2018, the FASB issued ASU No. 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income," which allows reclassification from Accumulated Other Comprehensive Income (Loss) ("AOCI"), as required by ASC No. 740, "Income Taxes," to retained earnings for the residual tax effects resulting from the Tax Cuts and Jobs Act ("TCJA") enacted on December 22, 2017. The new standard is effective for the Company as of January 1, 2019. However, early adoption is permitted and the Company adopted the standard on January 1, 2018, resulting in a decrease of $13 million to retained earnings due to the reclassification of AOCI to retained earnings.

Effective in 2019

Leases

On February 25, 2016, the FASB issued ASU No. 2016-02, "Leases," which requires the identification of arrangements that should be accounted for as leases by lessees. In general, for lease arrangements exceeding a twelve-month term, these arrangements must be recognized as assets and liabilities on the balance sheet of the lessee. Under previous GAAP, all operating leases were off-balance sheet, regardless of the term. A right-of-use asset and lease obligation will be recorded for all leases with a term exceeding twelve months, whether operating or financing, while the income statement will reflect lease expense for operating leases and amortization/interest expense for financing leases. The balance sheet amount recorded for existing leases at the date of adoption must be calculated using the applicable incremental borrowing rate at the date of adoption. The standard allows the option to apply the new guidance prospectively at the effective date, without adjustment to comparative periods presented with certain practical expedients available. It is effective for the Company on January 1, 2019. The Company has assessed the impact that adopting this new accounting standard will have on our consolidated financial statements and footnote disclosures and has concluded it will be immaterial. There will be an immaterial increase to assets and liabilities in equal and offsetting amounts with no change to the income statement presentation.

2. Significant Accounting Policies (Continued)

Hedging Activities

On August 28, 2017, the FASB issued ASU No. 2017-12, "Derivatives and Hedging," which is intended to better align risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The amendments expand and refine hedge accounting for both nonfinancial and financial risk components and are intended to better align the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The new standard is effective for the Company on January 1, 2019. The Company has assessed the impact this new standard will have on our consolidated financial statements and footnote disclosures and has concluded it will be immaterial.

Effective in 2020

Allowance for Loan Losses

On June 16, 2016, the FASB issued ASU No. 2016-13, "Financial Instruments — Credit Losses," which requires measurement and recognition of an allowance for loan loss that estimates remaining expected credit losses for financial assets held at the reporting date. Our current allowance for loan loss is an incurred loss model. As a result, we expect the new guidance will result in an increase to our allowance for loan losses. The standard is to be applied through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The standard is effective for the Company as of January 1, 2020 and will primarily impact the allowance for loan losses related to our Private Education Loans and FFELP Loans. This standard represents a significant change from existing GAAP and may result in material changes to the Company's accounting for the allowance for loan losses. We are currently evaluating the impact of adopting this accounting standard on our consolidated financial statements and footnote disclosures.

3. Education Loans

Education loans consist of FFELP and Private Education Loans.

There are three principal categories of FFELP Loans: Stafford, PLUS, and FFELP Consolidation Loans. Generally, Stafford and PLUS Loans have repayment periods of between 5 and 10 years. FFELP Consolidation Loans have repayment periods of 12 to 30 years. FFELP Loans do not require repayment, or have modified repayment plans, while the customer is in-school and during the grace period immediately upon leaving school. The customer may also be granted a deferment or forbearance for a period of time based on need, during which time the customer is not considered to be in repayment. Interest continues to accrue on loans in the in-school, deferment and forbearance period. FFELP Loans obligate the customer to pay interest at a stated fixed rate or a variable rate reset annually (subject to a cap) on July 1 of each year depending on when the loan was originated and the loan type. FFELP Loans disbursed before April 1, 2006 earn interest at the greater of the borrower's rate or a floating rate based on the Special Allowance Payment ("SAP") formula, with the interest earned on the floating rate that exceeds the interest earned from the customer being paid directly by ED. For loans disbursed after April 1, 2006, FFELP Loans effectively only earn at the SAP rate, as the excess interest earned when the borrower rate exceeds the SAP rate (Floor Income) is required to be rebated to ED.

FFELP Loans are insured as to their principal and accrued interest in the event of default subject to a Risk Sharing level based on the date of loan disbursement. These insurance obligations are supported by contractual rights against the United States. For loans disbursed after October 1, 1993 and before July 1, 2006, we receive 98 percent reimbursement on all qualifying default claims. For loans disbursed on or after July 1, 2006, we receive 97 percent reimbursement.

3. Education Loans (Continued)

Private Education Loans bear the full credit risk of the customer. Private Education Refinance Loans generally have a fixed interest rate with the remaining Private Education Loans generally at a variable rate indexed to LIBOR or Prime indices. The majority of loans in our portfolio are cosigned. Similar to FFELP loans, Private Education Loans are generally non-dischargeable in bankruptcy. Most loans have repayment terms of 10 to 15 years or more, and for loans made prior to 2009, payments are typically deferred until after graduation. However, since 2009 we began to encourage interest-only or fixed payment options while the customer is enrolled in school.

The estimated weighted average life of education loans in our portfolio was approximately 6 years and 7 years at December 31, 2018 and 2017, respectively. The following table reflects the distribution of our education loan portfolio by program.

	December 31, 2018		Year Ended December 31, 2018	
(Dollars in millions)	**Ending Balance**	**% of Balance**	**Average Balance**	**Average Effective Interest Rate**
FFELP Stafford and Other Education Loans, net[(1)]	$ 24,641	26%	$ 26,612	3.98%
FFELP Consolidation Loans, net	47,612	50	50,359	3.91
Private Education Loans, net	22,245	24	23,281	7.64
Total education loans, net	$ 94,498	100%	$ 100,252	4.79%

	December 31, 2017		Year Ended December 31, 2017	
(Dollars in millions)	**Ending Balance**	**% of Balance**	**Average Balance**	**Average Effective Interest Rate**
FFELP Stafford and Other Education Loans, net[(1)]	$ 28,409	27%	$ 30,462	2.94%
FFELP Consolidation Loans, net	53,294	51	54,527	3.30
Private Education Loans, net	23,419	22	23,762	6.88
Total education loans, net	$ 105,122	100%	$ 108,751	3.98%

(1) Primarily Stafford Loans, but also includes federally guaranteed PLUS and HEAL Loans.

As of both December 31, 2018 and 2017, 86 percent of our education loan portfolio was in repayment.

4. Allowance for Loan Losses

Our provisions for loan losses represent the periodic expense of maintaining an allowance sufficient to absorb incurred probable losses, net of expected recoveries, in the held-for-investment loan portfolios. The evaluation of the provisions for loan losses is inherently subjective, as it requires material estimates that may be susceptible to significant changes. We segregate our Private Education Loan portfolio in two classes of loans in monitoring and assessing credit risk — Troubled Debt Restructurings ("TDRs") and Non-TDRs. We believe that the allowance for loan losses is appropriate to cover probable losses incurred in the loan portfolios.

4. Allowance for Loan Losses (Continued)

Allowance for Loan Losses Metrics

(Dollars in millions)	Year Ended December 31, 2018 FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 60	$ 1,297	$ 10	$ 1,367
Total provision	70	299	1	370
Net adjustment resulting from the change in the charge-off rate[1]	—	(32)	—	(32)
Net charge-offs remaining[2]	(54)	(371)	(2)	(427)
Total net charge-offs	(54)	(403)	(2)	(459)
Reclassification of interest reserve[3]	—	8	—	8
Ending balance	$ 76	$ 1,201	$ 9	$ 1,286
Allowance Ending Balance:				
Individually evaluated for impairment — TDR	$ —	$ 1,100	$ 8	$ 1,108
Collectively evaluated for impairment:				
Excluding Purchased Non-Credit Impaired Loans acquired at a discount and Purchased Credit Impaired Loans	76	101	1	178
Purchased Non-Credit Impaired Loans acquired at a discount[4]	—	—	—	—
Purchased Credit Impaired Loans[4]	—	—	—	—
Ending total allowance	$ 76	$ 1,201	$ 9	$ 1,286
Loans Ending Balance:				
Individually evaluated for impairment — TDR	$ —	$ 10,336	$ 28	$ 10,364
Collectively evaluated for impairment:				
Excluding Purchased Non-Credit Impaired Loans acquired at a discount and Purchased Credit Impaired Loans	68,880	11,464	51	80,395
Purchased Non-Credit Impaired Loans acquired at a discount[4]	2,850	2,180	—	5,030
Purchased Credit Impaired Loans[4]	—	225	—	225
Ending total loans[5]	$ 71,730	$ 24,205	$ 79	$ 96,014
Net charge-offs as a percentage of average loans in repayment, excluding the net adjustment resulting from the change in the charge-off rate[1]	.09%	1.66%	—%	
Net adjustment resulting from the change in charge-off rate as a percentage of average loans in repayment[1]	—%	.14%	—%	
Allowance coverage of charge-offs	1.4	3.0	—	
Allowance as a percentage of the ending total loan balance	.11%	4.96%	11.52%	
Allowance as a percentage of the ending loans in repayment	.13%	5.45%	11.52%	
Ending total loans[5]	$ 71,730	$ 24,205	$ 79	
Average loans in repayment	$ 62,927	$ 22,312	$ 75	
Ending loans in repayment	$ 59,551	$ 22,037	$ 79	

(1) In third-quarter 2018, the portion of the loan amount charged off at default on Private Education Loans increased from 79 percent to 80.5 percent. This charge resulted in a $32 million reduction to the balance of the receivable for partially charged-off loan balance.

(2) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See "Receivable for Partially Charged-Off Private Education Loans" for further discussion.

(3) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan's principal balance.

(4) The Purchased Credit Impaired Loans' losses are not provided for by the allowance for loan losses in the above table as these loans are separately reserved for, if needed. No allowance for loan losses has been established for these loans as of December 31, 2018. The losses of the Purchased Non-Credit Impaired Loans acquired at a discount are not provided for by the allowance for loan losses in the above table as the remaining purchased discount associated with the FFELP and Private Education Loans of $37 million and $326 million, respectively, as of December 31, 2018 is greater than the incurred losses and as a result no allowance for loan losses has been established for these loans as of December 31, 2018.

(5) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

	Year Ended December 31, 2017			
(Dollars in millions)	FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 67	$ 1,351	$ 15	$ 1,433
Total provision	42	382	2	426
Charge-offs[(1)]	(49)	(443)	(7)	(499)
Reclassification of interest reserve[(2)]	—	7	—	7
Ending balance	$ 60	$ 1,297	$ 10	$ 1,367
Allowance Ending Balance:				
Individually evaluated for impairment - TDR	$ —	$ 1,171	$ 9	$ 1,180
Collectively evaluated for impairment:				
Excluding Purchased Non-Credit Impaired Loans acquired at a discount and Purchased Credit Impaired Loans	60	126	1	187
Purchased Non-Credit Impaired Loans acquired at a discount[(3)]	—	—	—	—
Purchased Credit Impaired Loans[(3)]	—	—	—	—
Ending total allowance	$ 60	$ 1,297	$ 10	$ 1,367
Loans Ending Balance:				
Individually evaluated for impairment - TDR	$ —	$ 10,921	$ 30	$ 10,951
Collectively evaluated for impairment:				
Excluding Purchased Non-Credit Impaired Loans acquired at a discount and Purchased Credit Impaired Loans	77,860	11,861	40	89,761
Purchased Non-Credit Impaired Loans acquired at a discount[(3)]	3,237	2,610	—	5,847
Purchased Credit Impaired Loans[(3)]	—	248	—	248
Ending total loans[(4)]	$ 81,097	$ 25,640	$ 70	$ 106,807
Charge-offs as a percentage of average loans in repayment	.07%	1.98%	5.39%	
Allowance coverage of charge-offs	1.2	2.9	1.5	
Allowance as a percentage of the ending total loan balance	.07%	5.06%	14.32%	
Allowance as a percentage of the ending loans in repayment	.09%	5.66%	14.32%	
Ending total loans[(4)]	$ 81,097	$ 25,640	$ 70	
Average loans in repayment	$ 68,318	$ 22,342	$ 130	
Ending loans in repayment	$ 67,853	$ 22,924	$ 70	

(1) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See “Receivable for Partially Charged-Off Private Education Loans” for further discussion.

(2) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan’s principal balance.

(3) The Purchased Credit Impaired Loans’ losses are not provided for by the allowance for loan losses in the above table as these loans are separately reserved for, if needed. No allowance for loan losses has been established for these loans as of December 31, 2017. The losses of the Purchased Non-Credit Impaired Loans acquired at a discount are not provided for by the allowance for loan losses in the above table as the remaining purchased discount associated with the FFELP and Private Education Loans of $43 million and $392 million, respectively, as of December 31, 2017 is greater than the incurred losses and as a result no allowance for loan losses has been established for these loans as of December 31, 2017.

(4) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

	Year Ended December 31, 2016			
(Dollars in millions)	FFELP Loans	Private Education Loans	Other Loans	Total
Allowance for Loan Losses				
Beginning balance	$ 78	$ 1,471	$ 15	$ 1,564
Total provision	43	383	3	429
Charge-offs[1]	(54)	(513)	(3)	(570)
Reclassification of interest reserve[2]	—	10	—	10
Ending balance	$ 67	$ 1,351	$ 15	$ 1,433
Allowance Ending Balance:				
Individually evaluated for impairment - TDR	$ —	$ 1,190	$ 11	$ 1,201
Collectively evaluated for impairment	67	161	4	232
Ending total allowance	$ 67	$ 1,351	$ 15	$ 1,433
Loans Ending Balance:				
Individually evaluated for impairment - TDR	$ —	$ 11,165	$ 32	$ 11,197
Collectively evaluated for impairment	86,918	13,983	132	101,033
Ending total loans[3]	$ 86,918	$ 25,148	$ 164	$ 112,230
Charge-offs as a percentage of average loans in repayment	.07%	2.20%	2.10%	
Allowance coverage of charge-offs	1.2	2.6	7.0	
Allowance as a percentage of the ending total loan balance	.08%	5.37%	9.35%	
Allowance as a percentage of the ending loans in repayment	.09%	6.10%	9.35%	
Ending total loans[3]	$ 86,918	$ 25,148	$ 164	
Average loans in repayment	$ 72,714	$ 23,275	$ 104	
Ending loans in repayment	$ 70,557	$ 22,150	$ 164	

(1) Charge-offs are reported net of expected recoveries. For Private Education Loans, the expected recovery amount is transferred to the receivable for partially charged-off loan balance. Charge-offs include charge-offs against the receivable for partially charged-off loans which represents the difference between what was expected to be recovered and any shortfalls in what was actually recovered in the period. See “Receivable for Partially Charged-Off Private Education Loans” for further discussion.

(2) Represents the additional allowance related to the amount of uncollectible interest reserved within interest income that is transferred in the period to the allowance for loan losses when interest is capitalized to a loan’s principal balance.

(3) Ending total loans for Private Education Loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

Key Credit Quality Indicators

FFELP Loans are substantially insured and guaranteed as to their principal and accrued interest in the event of default. The key credit quality indicator for this portfolio is loan status. The impact of changes in loan status is incorporated quarterly into the allowance for loan losses calculation.

	FFELP Loan Delinquencies					
	December 31, 2018		December 31, 2017		December 31, 2016	
(Dollars in millions)	**Balance**	**%**	**Balance**	**%**	**Balance**	**%**
Loans in-school/grace/deferment[1]	$ 3,793		$ 4,711		$ 5,871	
Loans in forbearance[2]	8,386		8,533		10,490	
Loans in repayment and percentage of each status:						
Loans current	53,500	89.8%	59,264	87.3%	61,977	87.8%
Loans delinquent 31-60 days[3]	1,964	3.4	2,638	3.9	2,820	4.0
Loans delinquent 61-90 days[3]	910	1.5	1,763	2.6	1,325	1.9
Loans delinquent greater than 90 days[3]	3,177	5.3	4,188	6.2	4,435	6.3
Total FFELP Loans in repayment	59,551	100%	67,853	100%	70,557	100%
Total FFELP Loans, gross	71,730		81,097		86,918	
FFELP Loan unamortized premium	599		666		879	
Total FFELP Loans	72,329		81,763		87,797	
FFELP Loan allowance for losses	(76)		(60)		(67)	
FFELP Loans, net	$ 72,253		$ 81,703		$ 87,730	
Percentage of FFELP Loans in repayment		83.0%		83.7%		81.2%
Delinquencies as a percentage of FFELP Loans in repayment		10.2%		12.7%		12.2%
FFELP Loans in forbearance as a percentage of loans in repayment and forbearance		12.3%		11.2%		12.9%

(1) Loans for customers who may still be attending school or engaging in other permitted educational activities and are not yet required to make payments on their loans, e.g., residency periods for medical students or a grace period for bar exam preparation, as well as loans for customers who have requested and qualify for other permitted program deferments such as military, unemployment, or economic hardships.
(2) Loans for customers who have used their allowable deferment time or do not qualify for deferment, that need additional time to obtain employment or who have temporarily ceased making full payments due to hardship or other factors such as disaster relief.
(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

4. Allowance for Loan Losses (Continued)

For Private Education Loans, the key credit quality indicators are FICO scores, school type, the existence of a cosigner, the loan status and loan seasoning. The FICO scores and school type are assessed at origination. The other Private Education Loan key quality indicators can change and are incorporated quarterly into the allowance for loan losses calculation. The following table highlights the principal balance (excluding the receivable for partially charged-off loans) of our Private Education Loan portfolio stratified by the key credit quality indicators.

	Private Education Loans Credit Quality Indicators			
	TDRs			
	December 31, 2018		December 31, 2017	
(Dollars in millions)	Balance[2]	% of Balance	Balance[2]	% of Balance
Credit Quality Indicators				
Original Winning FICO Scores:				
FICO 640 and above	$ 9,133	92%	$ 9,647	92%
FICO below 640	836	8	889	8
Total	$ 9,969	100%	$ 10,536	100%
School Type:				
Not-for-profit	$ 7,888	79%	$ 8,247	78%
For-profit	2,081	21	2,289	22
Total	$ 9,969	100%	$ 10,536	100%
Cosigners:				
With cosigner	$ 6,172	62%	$ 6,441	61%
Without cosigner	3,797	38	4,095	39
Total	$ 9,969	100%	$ 10,536	100%
Seasoning[1]:				
1-12 payments	$ 335	3%	$ 506	5%
13-24 payments	436	4	644	6
25-36 payments	660	7	947	9
37-48 payments	934	10	1,271	12
More than 48 payments	7,178	72	6,691	63
Not yet in repayment	426	4	477	5
Total	$ 9,969	100%	$ 10,536	100%

(1) Number of months in active repayment for which a scheduled payment was received.
(2) Balance equals the gross Private Education Loans.

4. Allowance for Loan Losses (Continued)

	Private Education Loans Credit Quality Indicators			
	Non-TDRs			
	December 31, 2018		December 31, 2017	
(Dollars in millions)	Balance[2]	% of Balance	Balance[2]	% of Balance
Credit Quality Indicators				
Original Winning FICO Scores:				
FICO 640 and above	$ 13,087	96%	$ 13,752	96%
FICO below 640	475	4	592	4
Total	$ 13,562	100%	$ 14,344	100%
School Type:				
Not-for-profit	$ 11,953	88%	$ 12,431	87%
For-profit	1,609	12	1,913	13
Total	$ 13,562	100%	$ 14,344	100%
Cosigners:				
With cosigner	$ 6,961	51%	$ 9,193	64%
Without cosigner	6,601	49	5,151	36
Total	$ 13,562	100%	$ 14,344	100%
Seasoning[1]:				
1-12 payments	$ 3,353	25%	$ 1,424	10%
13-24 payments	486	3	437	3
25-36 payments	322	2	466	3
37-48 payments	383	3	867	6
More than 48 payments	8,626	64	10,566	74
Not yet in repayment	392	3	584	4
Total	$ 13,562	100%	$ 14,344	100%

(1) Number of months in active repayment for which a scheduled payment was received.
(2) Balance equals the gross Private Education Loans.

4. Allowance for Loan Losses (Continued)

	Private Education Loan Delinquencies					
	TDRs					
	December 31, 2018		December 31, 2017		December 31, 2016	
(Dollars in millions)	**Balance**	**%**	**Balance**	**%**	**Balance**	**%**
Loans in-school/grace/deferment[1]	$ 426		$ 477		$ 579	
Loans in forbearance[2]	518		681		588	
Loans in repayment and percentage of each status:						
Loans current	7,890	87.4%	8,333	88.9%	8,273	85.8%
Loans delinquent 31-60 days[3]	344	3.8	351	3.7	412	4.3
Loans delinquent 61-90 days[3]	235	2.6	207	2.2	267	2.8
Loans delinquent greater than 90 days[3]	556	6.2	487	5.2	686	7.1
Total TDR loans in repayment	9,025	100%	9,378	100%	9,638	100%
Total TDR loans, gross	9,969		10,536		10,805	
TDR loans unamortized discount	(212)		(225)		(237)	
Total TDR loans	9,757		10,311		10,568	
TDR loans receivable for partially charged-off loans	367		385		360	
TDR loans allowance for losses	(1,100)		(1,171)		(1,190)	
TDR loans, net	$ 9,024		$ 9,525		$ 9,738	
Percentage of TDR loans in repayment		90.5%		89.0%		89.2%
Delinquencies as a percentage of TDR loans in repayment		12.6%		11.1%		14.2%
Loans in forbearance as a percentage of TDR loans in repayment and forbearance		5.4%		6.8%		5.7%

(1) Deferment includes customers who have returned to school or are engaged in other permitted educational activities and are not yet required to make payments on their loans, e.g., residency periods for medical students or a grace period for bar exam preparation.

(2) Loans for customers who have requested extension of grace period generally during employment transition or who have temporarily ceased making full payments due to hardship or other factors such as disaster relief, consistent with established loan program servicing policies and procedures.

(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

4. Allowance for Loan Losses (Continued)

	Private Education Loan Delinquencies					
	Non-TDRs					
	December 31, 2018		December 31, 2017		December 31, 2016	
(Dollars in millions)	Balance	%	Balance	%	Balance	%
Loans in-school/grace/deferment[1]	$ 392		$ 584		$ 814	
Loans in forbearance[2]	158		214		202	
Loans in repayment and percentage of each status:						
Loans current	12,851	98.8%	13,257	97.9%	12,233	97.8%
Loans delinquent 31-60 days[3]	71	.5	120	.9	110	.9
Loans delinquent 61-90 days[3]	32	.3	59	.4	54	.4
Loans delinquent greater than 90 days[3]	58	.4	110	.8	115	.9
Total non-TDR loans in repayment	13,012	100%	13,546	100%	12,512	100%
Total non-TDR loans, gross	13,562		14,344		13,528	
Non-TDR loans unamortized discount	(547)		(699)		(220)	
Total non-TDR loans	13,015		13,645		13,308	
Non-TDR loans receivable for partially charged-off loans	307		375		455	
Non-TDR loans allowance for losses	(101)		(126)		(161)	
Non-TDR loans, net	$ 13,221		$ 13,894		$ 13,602	
Percentage of non-TDR loans in repayment		95.9%		94.4%		92.5%
Delinquencies as a percentage of non-TDR loans in repayment		1.2%		2.1%		2.2%
Loans in forbearance as a percentage of non-TDR loans in repayment and forbearance		1.2%		1.6%		1.6%

(1) Deferment includes customers who have returned to school or are engaged in other permitted educational activities and are not yet required to make payments on their loans, e.g., residency periods for medical students or a grace period for bar exam preparation.
(2) Loans for customers who have requested extension of grace period generally during employment transition or who have temporarily ceased making full payments due to hardship or other factors such as disaster relief, consistent with established loan program servicing policies and procedures.
(3) The period of delinquency is based on the number of days scheduled payments are contractually past due.

Receivable for Partially Charged-Off Private Education Loans

At the end of each month, for loans that are 212 or more days past due, we charge off the estimated loss of a defaulted loan balance. Actual recoveries are applied against the remaining loan balance that was not charged off. We refer to this remaining loan balance as the “receivable for partially charged-off loans.” If actual periodic recoveries are less than expected, the difference is immediately charged off through the allowance for Private Education Loan losses with an offsetting reduction in the receivable for partially charged-off Private Education Loans. If actual periodic recoveries are greater than expected, they will be reflected as a recovery through the allowance for Private Education Loan losses once the cumulative recovery amount exceeds the cumulative amount originally expected to be recovered.

4. Allowance for Loan Losses (Continued)

The following table summarizes the activity in the receivable for partially charged-off loans.

(Dollars in millions)	Years Ended December 31, 2018	2017	2016
Receivable at beginning of period	$ 760	$ 815	$ 881
Expected future recoveries of current period defaults[1]	89	110	128
Recoveries[2]	(139)	(155)	(181)
Charge-offs[3]	(36)	(10)	(13)
Receivable at end of period	$ 674	$ 760	$ 815

(1) Represents our estimate of the amount to be collected in the future.

(2) Current period cash collections.

(3) Represents the current period recovery shortfall — the difference between what was expected to be collected and what was actually collected. Additionally, in third-quarter 2018, the portion of the loan amount charged off at default increased from 79 percent to 80.5 percent. This change resulted in a $32 million reduction to the balance of the receivable for partially charged-off loans. These amounts are included in total charge-offs as reported in the "Allowance for Private Education Loan Losses" table.

Troubled Debt Restructurings ("TDRs")

We sometimes modify the terms of loans for customers experiencing financial difficulty. Where we have granted either a forbearance of greater than three months, an interest rate reduction or an extended repayment plan, these are classified as TDRs. Approximately 65 percent and 61 percent of the loans granted forbearance have qualified as a TDR loan at December 31, 2018, and 2017, respectively. The unpaid principal balance of TDR loans that were in an interest rate reduction plan as of December 31, 2018 and 2017 was $1.8 billion and $2.7 billion, respectively.

At December 31, 2018 and 2017, all of our TDR loans had a related allowance recorded. The following table provides the recorded investment, unpaid principal balance and related allowance for our TDR loans.

(Dollars in millions)	TDRs December 31, 2018	December 31, 2017
Recorded investment[1]	$ 10,326	$ 10,890
Total ending loans[2]	$ 10,336	$ 10,921
Related allowance	$ 1,100	$ 1,171

(1) Recorded investment is equal to the unpaid principal balance (which includes the receivable for partially charged-off loans), accrued interest and unamortized discount.

(2) Total ending loans includes the receivable for partially charged-off loans.

4. Allowance for Loan Losses (Continued)

The following table provides the average recorded investment and interest income recognized for our TDR loans.

(Dollars in millions)	Years Ended December 31, 2018	2017	2016
Average recorded investment	$ 10,637	$ 10,989	$ 11,078
Interest income recognized	$ 764	$ 708	$ 667

The following table provides the amount of loans modified in the periods presented that resulted in a TDR. Additionally, the table summarizes charge-offs occurring in the TDR portfolio, as well as TDRs for which a payment default occurred in the current period within 12 months of the loan first being designated as a TDR. We define payment default as 60 days past due for this disclosure.

(Dollars in millions)	Years Ended December 31, 2018	2017	2016
Modified loans[1]	$ 596	$ 816	$ 1,169
Charge-offs[2]	$ 343	$ 346	$ 382
Payment-default	$ 142	$ 181	$ 265

(1) Represents period ending balance of loans that have been modified during the period and resulted in a TDR.
(2) Represents loans that charged off that were classified as TDRs.

Accrued Interest Receivable

The following table provides information regarding accrued interest receivable on our Private Education Loans.

(Dollars in millions)	Total	Greater Than 90 Days Past Due	Allowance for Uncollectible Interest
December 31, 2018			
TDR	$ 205	$ 26	$ 23
Non-TDR	149	3	4
Total	$ 354	$ 29	$ 27
December 31, 2017			
TDR	$ 196	$ 20	$ 20
Non-TDR	187	4	6
Total	$ 383	$ 24	$ 26
December 31, 2016			
TDR	$ 192	$ 28	$ 23
Non-TDR	199	5	7
Total	$ 391	$ 33	$ 30

5. Business Combinations, Goodwill and Acquired Intangible Assets

Business Combinations

Acquisitions are accounted for under the acquisition method of accounting as defined in ASC 805, "Business Combinations." The Company allocates the purchase price to the fair value of the acquired tangible assets, liabilities and identifiable intangible assets as of the acquisition date as determined by an independent appraiser.

Acquisition of Earnest

In November 2017, Navient acquired a 95 percent majority controlling interest in Earnest for approximately $149 million in cash. Earnest is a leading financial technology and education finance company that originates Private Education Refinance Loans. We engaged an independent appraiser to assist in the valuation of the assets acquired and liabilities assumed including identifiable intangible assets. In November 2018, the Company finalized its purchase price allocation for Earnest, which resulted in an excess purchase price over fair value of net assets acquired, or goodwill, of $77 million. The results of operations of Earnest have been included in Navient's consolidated financial statements since the acquisition date and are reflected in Navient's Consumer Lending segment and its Private Education Refinance Loans reporting unit. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the year ended December 31, 2017, as the pro forma impact was deemed immaterial.

Identifiable intangible assets at the acquisition date included definite life intangible assets with an aggregate fair value of approximately $20 million primarily including the Earnest trade name and developed technology. The intangible assets will be amortized over a period of 5 to 10 years based on the estimated economic benefit derived from each of the underlying assets.

Acquisition of Duncan Solutions

In July 2017, Navient acquired a 100 percent controlling interest in Duncan Solutions for approximately $86 million in cash. Duncan Solutions is a leading transportation revenue management company serving municipalities and toll authorities, offering a range of technology-enabled products and services to support its clients' parking and tolling operations. We engaged an independent appraiser to assist in the valuation of the assets acquired and liabilities assumed including identifiable intangible assets. In July 2018, the Company finalized its purchase price allocation for Duncan Solutions, which resulted in an excess purchase price over the fair value of net assets acquired, or goodwill, of $39 million. The results of operations of Duncan Solutions have been included in Navient's consolidated financial statements since the acquisition date and are reflected in Navient's Business Processing segment and its Government Services reporting unit. Navient has not disclosed the pro forma impact of this acquisition to the results of operations for the year ended December 31, 2017, as the pro forma impact was deemed immaterial.

Identifiable intangible assets at the acquisition date include definite life intangible assets with an aggregate fair value of approximately $33 million primarily including customer relationships, developed technology and the Duncan Solutions trade name. The intangible assets will be amortized over a period of 2 to 10 years based on the estimated economic benefit derived from each of the underlying assets.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

Goodwill

Goodwill resulting from our acquisitions is assigned to a reporting unit or units. A reporting unit is the same or one level below an operating segment. As discussed in “Note 12 – Segment Reporting," we have the following new reportable operating segments effective first-quarter 2018: Federal Education Loans, Consumer Lending, Business Processing and Other. As a result of this change in our reporting structure, our reporting units with goodwill as of December 31, 2018 include (1) FFELP Loans (inclusive of the former FFELP Loans reporting unit and the related internal loan servicing which was formerly a part of the old Servicing reporting unit), (2) Federal Education Loan Servicing (inclusive of the former Servicing reporting unit except for the internal loan servicing that was moved to the FFELP loans reporting unit), (3) Private Education Loans, (4) Private Education Refinance Loans (formerly called the Earnest reporting unit), (5) Government Services (inclusive of the former Asset Recovery – Gila reporting unit and other government services lines of businesses previously included in our Asset Recovery – Contingency reporting unit) and (6) Healthcare Services (formerly called the Asset Recovery – Xtend Healthcare reporting unit).

This change in composition of our reporting units required a reallocation of $50 million of goodwill from our former Servicing reporting unit to the newly comprised FFELP Loans and Federal Education Loan Servicing reporting units, which were allocated $37 million and $13 million, respectively. In connection with the reallocation of goodwill, we assessed relevant qualitative factors to determine whether it was “more-likely-than-not” that the fair values of the FFELP Loans and Federal Education Loan Servicing reporting units were less than their respective carrying values at March 31, 2018. No goodwill was deemed impaired after assessing these relevant qualitative factors.

The change in our reporting structure also resulted in a change in the composition of the former Asset Recovery – Contingency reporting unit (now referred to as the Federal Education Loan Asset Recovery reporting unit), which did not have any goodwill. In connection with the realignment of our reportable segments, components of this reporting unit were moved to the Government Services reporting unit. Since the composition of the Government Services reporting unit, which had a goodwill balance, changed as a result of our new reporting structure, we assessed relevant qualitative factors to determine whether it was “more-likely-than-not” that the fair value of the Government Services reporting unit was less than its carrying value at March 31, 2018. No goodwill was deemed impaired after assessing these relevant qualitative factors.

The following table summarizes our goodwill, accumulated impairments and net goodwill for our reporting units and reportable segments as of December 31, 2018.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

(Dollars in millions)	As of December 31, 2018 Gross	Accumulated Impairments and Other Adjustments	Net
Federal Education Loans reportable segment:			
FFELP Loans	$ 231	$ (4)	$ 227
Federal Education Loan Servicing	13	—	13
Total Federal Education Loans reportable segment	244	(4)	240
Consumer Lending reportable segment:			
Private Education Loans(1)	147	(41)	106
Private Education Refinance Loans	77	—	77
Total Consumer Lending reportable segment	224	(41)	183
Business Processing reportable segment:			
Government Services	272	(136)	136
Healthcare Services	106	—	106
Total Business Processing reportable segment	378	(136)	242
Total	$ 846	$ (181)	$ 665

(Dollars in millions)	As of December 31, 2017 Gross	Accumulated Impairments and Other Adjustments	Net
FFELP Loans reportable segment	194	(4)	190
Private Education Loans reportable segment:			
Private Education Loans(1)	147	(41)	106
Earnest	87	—	87
Total Private Education Loans reportable segment	234	(41)	193
Business Services reportable segment:			
Servicing	50	—	50
Asset Recovery - Contingency	136	(136)	—
Asset Recovery - Gila	160	—	160
Asset Recovery - Xtend Healthcare	108	—	108
Total Business Services reportable segment	454	(136)	318
Total	$ 882	$ (181)	$ 701

(1) In conjunction with our Separation from SLM BankCo in 2014, we removed $41 million of goodwill from our balance sheet as required under ASC 350, "Intangibles — Goodwill and Other." This goodwill was allocated to the consumer banking business retained by SLM BankCo based on relative fair value.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

Interim Goodwill Impairment Testing – Third-Quarter 2018

In third-quarter 2018, we wrote off a $16 million toll services relationship intangible asset as a result of receiving a notice of termination related to a toll services contract in our Government Services reporting unit. As a result of this termination, we also performed a valuation of the Government Services reporting unit, which has $136 million of goodwill and concluded the goodwill was not impaired as the fair value of the reporting unit was 56 percent greater than the book basis. We estimated the fair value of the reporting unit utilizing a market approach which applies market-based revenue, EBITDA and net income multiples from comparable publicly-traded companies to the reporting unit's revenue, EBITDA and net income indicators.

Annual Goodwill Impairment Testing – October 1, 2018

We perform our goodwill impairment testing annually in the fourth quarter as of October 1. As part of the 2018 annual impairment testing associated with our FFELP Loans, Federal Education Loan Servicing (both inclusive of portions of the former Servicing reporting unit), and Private Education Loans reporting units, we assessed relevant qualitative factors to determine whether it is "more-likely-than-not" that the fair value of an individual reporting unit is less than its carrying value. We considered the amount of excess fair values over the carrying values of the FFELP Loans, Servicing and the Private Education Loans reporting units as of October 1, 2016 when we last performed a Step 1 goodwill impairment test. The fair values of these reporting units at October 1, 2016 were substantially in excess of their carrying amounts. In addition, the cash flows for our FFELP Loans and Private Education Loans reporting units are very predictable and the outlook and associated cash flow projections of these reporting units have not changed significantly since our 2016 assessment. No goodwill was deemed impaired for the reporting units after assessing these relevant qualitative factors. We also performed a qualitative assessment for the Federal Education Loan Servicing reporting unit and concluded that it is "more-likely-than-not" that the fair value of the reporting unit exceeded its carrying amount. The remaining goodwill in this reporting unit was not impaired.

In conjunction with 2018 annual impairment testing, we also assessed relevant qualitative factors to determine whether it is "more-likely-than-not" that the fair values of the Private Education Refinance Loans and the Government Services reporting units are less than their respective carrying values. For the Private Education Refinance Loans reporting unit, we considered the current status and outlook for this reporting unit since our November 2017 acquisition of Earnest and our 2018 launch of our Navi Refinance Loan product including origination volume, our ability to issue private credit ABS comprised entirely of the reporting unit's refinance loans and the acquisition value of Earnest. Loan origination volume has exceeded the acquisition plan. Accordingly, the outlook of this reporting unit has improved since our 2017 acquisition of Earnest and the launch of the Navi Refinance Loan product. No goodwill was deemed impaired for the Private Education Refinance Loans reporting unit.

We performed goodwill impairment testing in association with the Government Services reporting unit in third-quarter 2018 as discussed above. In conjunction with annual impairment testing, we assessed the outlook for this reporting unit in comparison with the outlook as of third-quarter 2018, 2018 earnings, and the current customer base and revenue backlog. Goodwill was not deemed to be impaired for this reporting unit after assessing these relevant qualitative factors.

We performed a valuation as of October 1, 2018 of the Healthcare Services reporting unit, which has $106 million of goodwill. We concluded the goodwill was not impaired as the fair value of the reporting unit was 28 percent greater than the carrying value of this reporting unit. We estimated the fair value of the reporting unit utilizing a market approach which applies market-based revenue, EBITDA and net income multiples from comparable publicly-traded companies to the reporting unit's revenue, EBITDA and net income indicators.

We also considered the current regulatory and legislative environment, the current economic environment, our 2018 earnings and 2019 expected earnings. We view these factors as favorable. Although our market capitalization was less than our book equity during fourth-quarter 2018, it was concluded that our market capitalization in relation to our book equity does not indicate impairment of our reporting units' respective goodwill at December 31, 2018.

5. Business Combinations, Goodwill and Acquired Intangible Assets (Continued)

Acquired Intangible Assets

Acquired intangible assets include the following:

	As of December 31, 2018			As of December 31, 2017		
(Dollars in millions)	**Cost Basis(1)**	**Accumulated Impairment and Amortization(1)**	**Net**	**Cost Basis(1)**	**Accumulated Impairment and Amortization(1)**	**Net**
Customer, services and lending relationships	$ 284	$ (226)	$ 58	$ 292	$ (234)	$ 58
Favorable lease	1	—	1	1	—	1
Non-competes	3	(3)	—	2	(2)	—
Software and technology	115	(90)	25	104	(85)	19
Trade names and trademarks(2)	61	(24)	37	48	(18)	30
Total acquired intangible assets	$ 464	$ (343)	$ 121	$ 447	$ (339)	$ 108

(1) Accumulated impairment and amortization include impairment amounts only if the acquired intangible asset has been deemed partially impaired. When an acquired intangible asset is considered fully impaired and no longer in use, the cost basis and any accumulated amortization related to the asset is written off.

(2) During 2016 we reclassified certain trade names from indefinite life to definite life intangible assets and began to amortize these assets over their expected benefit period.

We recorded amortization of acquired intangible assets from continuing operations totaling $31 million, $23 million and $29 million in 2018, 2017 and 2016, respectively. We will continue to amortize our intangible assets with definite useful lives over their remaining estimated useful lives. We estimate amortization expense associated with these intangible assets will be $26 million, $22 million, $19 million, $16 million and $38 million in 2019, 2020, 2021, 2022 and after 2022, respectively.

As discussed above, we wrote off a $16 million toll services relationship acquired intangible asset in its entirety due to the termination of a significant toll services contract in our Government Services reporting unit.

6. Borrowings

Borrowings consist of secured borrowings issued through our securitization program, borrowings through secured facilities, unsecured notes issued by us, and other interest-bearing liabilities related primarily to obligations to return cash collateral held.

6. Borrowings (Continued)

The following table summarizes our borrowings.

(Dollars in millions)	December 31, 2018 Short Term	December 31, 2018 Long Term	December 31, 2018 Total	December 31, 2017 Short Term	December 31, 2017 Long Term	December 31, 2017 Total
Unsecured borrowings:						
Senior unsecured debt[1]	$ 817	$ 10,674	$ 11,491	$ 1,306	$ 12,624	$ 13,930
Total unsecured borrowings	817	10,674	11,491	1,306	12,624	13,930
Secured borrowings:						
FFELP Loan securitizations[2]	—	66,318	66,318	—	71,208	71,208
Private Education Loan securitizations[3]	300	12,985	13,285	686	12,646	13,332
FFELP Loan — other facilities	2,927	2,625	5,552	1,536	6,830	8,366
Private Education Loan — other facilities	1,114	1,266	2,380	684	1,710	2,394
Other[4]	267	—	267	538	—	538
Total secured borrowings	4,608	83,194	87,802	3,444	92,394	95,838
Total before hedge accounting adjustments	5,425	93,868	99,293	4,750	105,018	109,768
Hedge accounting adjustments	(3)	(349)	(352)	21	(6)	15
Total	$ 5,422	$ 93,519	$ 98,941	$ 4,771	$105,012	$109,783

(1) Includes principal amount of $817 million and $1.3 billion of short-term debt as of December 31, 2018 and 2017, respectively. Includes principal amount of $10.8 billion and $12.7 billion of long-term debt as of December 31, 2018 and 2017, respectively.

(2) Includes $244 million of long-term debt related to the FFELP Loan asset-backed securitization repurchase facilities ("FFELP Loan Repurchase Facilities") as of December 31, 2018.

(3) Includes $300 million and $686 million of short-term debt related to the Private Education Loan asset-backed securitization repurchase facilities ("Private Education Loan Repurchase Facilities") as of December 31, 2018 and 2017, respectively. Includes $2.0 billion and $1.3 billion of long-term debt related to the Private Education Loan Repurchase Facilities as of December 31, 2018 and 2017, respectively.

(4) "Other" primarily includes the obligation to return cash collateral held related to derivative exposures.

6. Borrowings (Continued)

Short-term Borrowings

Short-term borrowings have a remaining term to maturity of one year or less. The following tables summarize outstanding short-term borrowings (secured and unsecured), the weighted average interest rates at the end of each period, and the related average balances and weighted average interest rates during the periods.

	December 31, 2018		Year Ended December 31, 2018	
(Dollars in millions)	Ending Balance	Weighted Average Interest Rate	Average Balance	Weighted Average Interest Rate
Private Education Loan securitizations[1]	$ 300	5.23%	$ 536	4.72%
FFELP Loan — other facilities	2,927	3.10	1,137	2.79
Private Education Loan — other facilities	1,114	3.63	847	3.40
Senior unsecured debt	814	4.92	2,021	5.90
Other interest-bearing liabilities	267	2.39	292	1.73
Total short-term borrowings	$ 5,422	3.56%	$ 4,833	4.35%
Maximum outstanding at any month end	$ 6,363			

	December 31, 2017		Year Ended December 31, 2017	
(Dollars in millions)	Ending Balance	Weighted Average Interest Rate	Average Balance	Weighted Average Interest Rate
Private Education Loan securitizations[1]	$ 686	4.65%	$ 706	4.32%
FFELP Loan — other facilities	1,536	2.11	261	1.26
Private Education Loan —other facilities	684	2.92	572	2.42
Senior unsecured debt	1,327	8.06	1,197	6.80
Other interest-bearing liabilities	538	1.33	458	1.27
Total short-term borrowings	$ 4,771	4.16%	$ 3,194	4.22%
Maximum outstanding at any month end	$ 4,771			

(1) Relates to Private Education Loan Repurchase Facilities.

6. Borrowings (Continued)

Long-term Borrowings

The following tables summarize outstanding long-term borrowings, the weighted average interest rates at the end of the periods, and the related average balances during the periods.

(Dollars in millions)	December 31, 2018 Ending Balance[(1)]	December 31, 2018 Weighted Average Interest Rate[(2)]	Year Ended December 31, 2018 Average Balance
Floating rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2019-2083	$ 74,842	3.38%	$ 80,189
Non-U.S. dollar-denominated:			
Interest bearing, due 2023-2040	4,064	.66	4,919
Total floating rate notes	78,906	3.24	85,108
Fixed rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2020-2059	14,431	5.57	13,814
Non-U.S.-dollar denominated:			
Interest bearing, due 2034	182	2.49	273
Total fixed rate notes	14,613	5.53	14,087
Total long-term borrowings	$ 93,519	3.60%	$ 99,195

(Dollars in millions)	December 31, 2017 Ending Balance[(1)]	December 31, 2017 Weighted Average Interest Rate[(2)]	Year Ended December 31, 2017 Average Balance
Floating rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2018-2083	$ 83,209	2.31%	$ 86,186
Non-U.S. dollar-denominated:			
Interest bearing, due 2023-2041	6,423	.37	7,355
Total floating rate notes	89,632	2.17	93,541
Fixed rate notes:			
U.S. dollar-denominated:			
Interest bearing, due 2019-2058	15,114	5.60	15,266
Non-U.S.-dollar denominated:			
Interest bearing, due 2034-2035	266	2.72	281
Total fixed rate notes	15,380	5.55	15,547
Total long-term borrowings	$ 105,012	2.67%	$ 109,088

(1) Ending balance is expressed in U.S. dollars using the spot currency exchange rate. Includes fair value adjustments under hedge accounting for notes designated as the hedged item in a fair value hedge.

(2) Weighted average interest rate is stated rate relative to currency denomination of debt.

6. Borrowings (Continued)

As of December 31, 2018, the expected maturities of our long-term borrowings are shown in the following table.

	Expected Maturity		
(Dollars in millions)	Senior Unsecured Debt	Secured Borrowings[1]	Total[2]
Year of Maturity			
2019	$ —	$ 10,274	$ 10,274
2020	2,046	9,814	11,860
2021	1,434	6,357	7,791
2022	1,736	6,215	7,951
2023	1,496	6,110	7,606
2024-2043	3,962	44,424	48,386
	10,674	83,194	93,868
Hedge accounting adjustments	107	(456)	(349)
Total	$ 10,781	$ 82,738	$ 93,519

(1) We view our securitization trust debt as long-term based on the contractual maturity dates which range from 2019 to 2083. However, we have projected the expected principal paydowns based on our current estimates regarding the securitized loans' prepayment speeds for purposes of this disclosure to better reflect how we expect this debt to be paid down over time. The projected principal paydowns in year 2019 include $10.3 billion related to the securitization trust debt.

(2) The aggregate principal amount of debt that matures in each period is $10.3 billion in 2019, $11.9 billion in 2020, $7.9 billion in 2021, $8.0 billion in 2022, $7.7 billion in 2023 and $48.8 billion in 2024-2043.

6. Borrowings (Continued)

Variable Interest Entities

We consolidate the following financing VIEs as of December 31, 2018 and 2017, as we are the primary beneficiary. As a result, these VIEs are accounted for as secured borrowings.

	December 31, 2018						
	Debt Outstanding			Carrying Amount of Assets Securing Debt Outstanding			
(Dollars in millions)	Short Term	Long Term	Total	Loans	Cash	Other Assets, Net	Total
Secured Borrowings — VIEs:							
FFELP Loan securitizations[1]	$ —	$ 66,318	$ 66,318	$ 66,266	$ 3,181	$ 1,211	$ 70,658
Private Education Loan securitizations[2]	300	12,985	13,285	16,336	536	198	17,070
FFELP Loan — other facilities	2,927	2,625	5,552	5,656	132	162	5,950
Private Education Loan — other facilities	1,114	1,266	2,380	3,361	79	27	3,467
Total before hedge accounting adjustments	4,341	83,194	87,535	91,619	3,928	1,598	97,145
Hedge accounting adjustments	—	(456)	(456)	—	—	(642)	(642)
Total	$ 4,341	$ 82,738	$ 87,079	$ 91,619	$ 3,928	$ 956	$ 96,503

	December 31, 2017						
	Debt Outstanding			Carrying Amount of Assets Securing Debt Outstanding			
(Dollars in millions)	Short Term	Long Term	Total	Loans	Cash	Other Assets, Net	Total
Secured Borrowings — VIEs:							
FFELP Loan securitizations[1]	$ —	$71,208	$71,208	$72,145	$ 2,335	$ 1,078	$ 75,558
Private Education Loan securitizations[2]	686	12,646	13,332	17,739	484	237	18,460
FFELP Loan — other facilities	1,536	3,999	5,535	5,565	204	156	5,925
Private Education Loan — other facilities	684	1,710	2,394	3,147	68	31	3,246
Total before hedge accounting adjustments	2,906	89,563	92,469	98,596	3,091	1,502	103,189
Hedge accounting adjustments	—	(246)	(246)	—	—	(342)	(342)
Total	$ 2,906	$89,317	$92,223	$98,596	$ 3,091	$ 1,160	$102,847

(1) Includes $244 million of long-term debt and $9 million of restricted cash related to the FFELP Loan Repurchase Facilities as of December 31, 2018.

(2) Includes $300 million of short-term debt, $2.0 billion of long-term debt and $115 million of restricted cash related to the Private Education Loan Repurchase Facilities as of December 31, 2018. Includes $686 million of short-term debt, $1.3 billion of long-term debt and $96 million of restricted cash related to the Private Education Loan Repurchase Facilities as of December 31, 2017.

6. Borrowings (Continued)

Secured Facilities and Unsecured Debt

FFELP Loans — Other Facilities

We have various secured borrowing facilities that we use to finance our FFELP Loans. Liquidity is available under these secured credit facilities to the extent we have eligible collateral and available capacity. The maximum borrowing capacity under these facilities will vary and is subject to each agreement's borrowing conditions. These include but are not limited to the facility's size, current usage and the availability and fair value of qualifying unencumbered FFELP Loan collateral. Our borrowings under these facilities are non-recourse. The maturity dates on these facilities range from November 2019 to April 2020. The interest rate on certain facilities can increase under certain circumstances. The facilities are subject to termination under certain circumstances. As of December 31, 2018, there was approximately $5.6 billion outstanding under these facilities, with approximately $6.0 billion of assets securing these facilities. As of December 31, 2018, the maximum unused capacity under these facilities was $752 million. As of December 31, 2018, we had $332 million of unencumbered FFELP Loans.

FFELP Loan ABS Repurchase Facilities

In 2018, we closed a $0.9 billion FFELP Loan ABS Repurchase Facility that provides liquidity for the acquisition of certain Navient-sponsored auction rate securities. Borrowings under the facility are secured by the auction rate securities. The lenders also have unsecured recourse to Navient Corporation as guarantor for any shortfall in amounts payable. Because the facility is secured by Navient-sponsored instruments issued in previous securitizations, we show the debt as part of FFELP Loan securitizations in the Secured Borrowings table above. As of December 31, 2018, there was approximately $0.2 billion outstanding under this facility.

Private Education Loans — Other Facilities

We have various secured borrowing facilities that we use to finance our Private Education Loans. Liquidity is available under these secured credit facilities to the extent we have eligible collateral and available capacity. The maximum borrowing capacity under these facilities will vary and is subject to each agreement's borrowing conditions. These include but are not limited to the facility's size, current usage and the availability and fair value of qualifying unencumbered Private Education Loan collateral. Our borrowings under these facilities are non-recourse. The maturity dates on these facilities range from June 2019 to June 2020. The interest rate on certain facilities can increase under certain circumstances. The facilities are subject to termination under certain circumstances. As of December 31, 2018, there was approximately $2.4 billion outstanding under these facilities, with approximately $3.5 billion of assets securing these facilities. As of December 31, 2018, the maximum unused capacity under these facilities was $635 million. As of December 31, 2018, we had $2.6 billion of unencumbered Private Education Loans.

Private Education Loan ABS Repurchase Facilities

Since the fourth quarter of 2015, we have closed on $3.2 billion of Private Education Loan ABS Repurchase Facilities. These repurchase facilities are collateralized by Residual Interests in previously issued Private Education Loan ABS trusts. The lenders also have unsecured recourse to Navient Corporation as guarantor for any shortfall in amounts payable. Because these facilities are secured by the Residual Interests in previous securitizations, we show the debt as part of Private Education Loan securitizations in the Secured Borrowings table above. As of December 31, 2018, there was approximately $2.3 billion outstanding.

Senior Unsecured Debt

We issued $500 million, $1.6 billion and $1.3 billion of unsecured debt in 2018, 2017 and 2016, respectively.

6. Borrowings (Continued)

Debt Repurchases

The following table summarizes activity related to our senior unsecured debt and ABS repurchases. "Gains (losses) on debt repurchases" is shown net of hedging-related gains and losses.

	Years Ended December 31,		
(Dollars in millions)	**2018**	**2017**	**2016**
Debt principal repurchased	$ 2,809	$ 513	$ 1,467
Gains (losses) on debt repurchases	19	(3)	1

7. Derivative Financial Instruments

Risk Management Strategy

We maintain an overall interest rate risk management strategy that incorporates the use of derivative instruments to minimize the economic effect of interest rate changes. Our goal is to manage interest rate sensitivity by modifying the repricing frequency and underlying index characteristics of certain balance sheet assets and liabilities so the net interest margin is not, on a material basis, adversely affected by movements in interest rates. We do not use derivative instruments to hedge credit risk. As a result of interest rate fluctuations, hedged assets and liabilities will appreciate or depreciate in market value. Income or loss on the derivative instruments that are linked to the hedged assets and liabilities will generally offset the effect of this unrealized appreciation or depreciation for the period the item is being hedged. We view this strategy as a prudent management of interest rate sensitivity. In addition, we utilize derivative contracts to minimize the economic impact of changes in foreign currency exchange rates on certain debt obligations that are denominated in foreign currencies. As foreign currency exchange rates fluctuate, these liabilities will appreciate and depreciate in value. These fluctuations, to the extent the hedge relationship is effective, are offset by changes in the value of the cross-currency interest rate swaps executed to hedge these instruments. Management believes certain derivative transactions entered into as hedges, primarily Floor Income Contracts and basis swaps, are economically effective; however, those transactions generally do not qualify for hedge accounting under GAAP (as discussed below) and thus may adversely impact earnings.

7. Derivative Financial Instruments (Continued)

Although we use derivatives to minimize the risk of interest rate and foreign currency changes, the use of derivatives does expose us to both market and credit risk. Market risk is the chance of financial loss resulting from changes in interest rates, foreign exchange rates and market liquidity. Credit risk is the risk that a counterparty will not perform its obligations under a contract and it is limited to the loss of the fair value gain in a derivative that the counterparty owes us. When the fair value of a derivative contract is negative, we owe the counterparty and, therefore, have no credit risk exposure to the counterparty; however, the counterparty has exposure to us. We minimize the credit risk in derivative instruments by entering into transactions with highly rated counterparties that are reviewed regularly by our Credit Department. We also maintain a policy of requiring that all derivative contracts be governed by an International Swaps and Derivative Association Master Agreement. Depending on the nature of the derivative transaction, bilateral collateral arrangements related to Navient Corporation contracts generally are required as well. When we have more than one outstanding derivative transaction with the counterparty, and there exists legally enforceable netting provisions with the counterparty (i.e., a legal right to offset receivable and payable derivative contracts), the “net” mark-to-market exposure, less collateral the counterparty has posted to us, represents exposure with the counterparty. When there is a net negative exposure, we consider our exposure to the counterparty to be zero. At December 31, 2018 and 2017, we had a net positive exposure (derivative gain positions to us less collateral which has been posted by counterparties to us) related to Navient Corporation derivatives of $19 million and $24 million, respectively.

Our on-balance sheet securitization trusts have $4.5 billion of Euro and British Pound Sterling denominated bonds outstanding as of December 31, 2018. To convert these non-U.S. dollar denominated bonds into U.S. dollar liabilities, the trusts have entered into foreign-currency swaps with highly-rated counterparties. In addition, the trusts have entered into $5.1 billion notional of interest rates swaps which are primarily used to convert Prime received on securitized education loans to LIBOR paid on the bonds. Our securitization trusts with swaps have ISDA documentation with protections against counterparty risk. The collateral calculations contemplated in the ISDA documentation of our securitization trusts require collateral based on the fair value of the derivative which may be adjusted for additional collateral based on rating agency criteria requirements considered within the collateral agreement. The trusts are not required to post collateral to the counterparties. At December 31, 2018 and 2017, the net positive exposure on swaps in securitization trusts was $7 million and $64 million, respectively.

Accounting for Derivative Instruments

Derivative instruments that are used as part of our interest rate and foreign currency risk management strategy include interest rate swaps, cross-currency interest rate swaps, and interest rate floor contracts with indices that relate to the pricing of specific balance sheet assets and liabilities. The accounting for derivative instruments requires that every derivative instrument, including certain derivative instruments embedded in other contracts, be recorded on the balance sheet as either an asset or liability measured at its fair value. As more fully described below, if certain criteria are met, derivative instruments are classified and accounted for by us as either fair value or cash flow hedges. If these criteria are not met, the derivative financial instruments are accounted for as trading.

Fair Value Hedges

Fair value hedges are generally used by us to hedge the exposure to changes in fair value of a recognized fixed rate asset or liability. We enter into interest rate swaps to economically convert fixed rate assets into variable rate assets and fixed rate debt into variable rate debt. We also enter into cross-currency interest rate swaps to economically convert foreign currency denominated fixed and floating debt to U.S. dollar denominated variable debt. For fair value hedges, we generally consider all components of the derivative’s gain and/or loss when assessing hedge effectiveness and generally hedge changes in fair values due to interest rates or interest rates and foreign currency exchange rates.

7. Derivative Financial Instruments (Continued)

Cash Flow Hedges

We use cash flow hedges to hedge the exposure to variability in cash flows for a forecasted debt issuance and for exposure to variability in cash flows of floating rate debt. This strategy is used primarily to minimize the exposure to volatility from future changes in interest rates. Gains and losses on the effective portion of a qualifying hedge are recorded in accumulated other comprehensive income and ineffectiveness is recorded immediately to earnings. In the case of a forecasted debt issuance, gains and losses are reclassified to earnings over the period which the stated hedged transaction affects earnings. If we determine it is not probable that the anticipated transaction will occur, gains and losses are reclassified immediately to earnings. In assessing hedge effectiveness, generally all components of each derivative's gains or losses are included in the assessment. We generally hedge exposure to changes in cash flows due to changes in interest rates or total changes in cash flow.

Trading Activities

When derivative instruments do not qualify as hedges, they are accounted for as trading instruments where all changes in fair value are recorded through earnings. We sell interest rate floors (Floor Income Contracts) to hedge the embedded Floor Income options in education loan assets. The Floor Income Contracts are written options which have a more stringent hedge effectiveness hurdle to meet. Specifically, our Floor Income Contracts do not qualify for hedge accounting treatment because the pay down of principal of the education loans underlying the Floor Income embedded in those education loans does not exactly match the change in the notional amount of our written Floor Income Contracts. Additionally, the term, the interest rate index and the interest rate index reset frequency of the Floor Income Contracts can be different from that of the education loans. Therefore, Floor Income Contracts do not qualify for hedge accounting treatment and are recorded as trading instruments. Regardless of the accounting treatment, we consider these contracts to be economic hedges for risk management purposes. We use this strategy to minimize our exposure to changes in interest rates.

We use basis swaps to minimize earnings variability caused by having different reset characteristics on our interest-earning assets and interest-bearing liabilities. The specific terms and notional amounts of the swaps are determined based on a review of our asset/liability structure, our assessment of future interest rate relationships, and on other factors such as short-term strategic initiatives. Hedge accounting requires that when using basis swaps, the change in the cash flows of the hedge effectively offset both the change in the cash flows of the asset and the change in the cash flows of the liability. Our basis swaps hedge variable interest rate risk; however, they generally do not meet this effectiveness criterion because the index of the swap does not exactly match the index of the hedged assets. Additionally, some of our FFELP Loans can earn at either a variable or a fixed interest rate depending on market interest rates and, therefore, swaps economically hedging these FFELP Loans do not meet the criteria for hedge accounting treatment. As a result, these swaps are recorded at fair value with changes in fair value reflected currently in the statement of income.

7. Derivative Financial Instruments (Continued)

Summary of Derivative Financial Statement Impact

The following tables summarize the fair values and notional amounts or number of contracts of all derivative instruments at December 31, 2018 and 2017, and their impact on other comprehensive income and earnings for 2018, 2017 and 2016.

Impact of Derivatives on Consolidated Balance Sheet

		Cash Flow		Fair Value		Trading		Total	
(Dollars in millions)	Hedged Risk Exposure	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017
Fair Values[1]									
Derivative Assets:									
Interest rate swaps	Interest rate	$ —	$ 95	$ 170	$ 290	$ 3	$ 7	$ 173	$ 392
Cross-currency interest rate swaps	Foreign currency and interest rate	—	—	6	88	—	—	6	88
Total derivative assets[2]		—	95	176	378	3	7	179	480
Derivative Liabilities:									
Interest rate swaps	Interest rate	—	(16)	(34)	(102)	(45)	(71)	(79)	(189)
Floor Income Contracts	Interest rate	—	—	—	—	(53)	(74)	(53)	(74)
Cross-currency interest rate swaps	Foreign currency and interest rate	—	—	(639)	(410)	(26)	(44)	(665)	(454)
Other[3]	Interest rate	—	—	—	—	(4)	(18)	(4)	(18)
Total derivative liabilities[2]		—	(16)	(673)	(512)	(128)	(207)	(801)	(735)
Net total derivatives		$ —	$ 79	$ (497)	$ (134)	$ (125)	$ (200)	$ (622)	$ (255)

(1) Fair values reported are exclusive of collateral held and pledged and accrued interest. Assets and liabilities are presented without consideration of master netting agreements. Derivatives are carried on the balance sheet based on net position by counterparty under master netting agreements, and classified in other assets or other liabilities depending on whether in a net positive or negative position.

(2) The following table reconciles gross positions without the impact of master netting agreements to the balance sheet classification:

	Other Assets		Other Liabilities	
(Dollar in millions)	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Gross position	$ 179	$ 480	$ (801)	$ (735)
Impact of master netting agreements	(22)	(42)	22	42
Derivative values with impact of master netting agreements (as carried on balance sheet)	157	438	(779)	(693)
Cash collateral (held) pledged	(266)	(536)	188	235
Net position	$ (109)	$ (98)	$ (591)	$ (458)

(3) "Other" includes derivatives related to our Total Return Swap Facility.

7. Derivative Financial Instruments (Continued)

The above fair values at December 31, 2018 reflect rule changes adopted by clearing organizations that require entities to treat derivative assets, liabilities and the related variation margin as a settlement of the derivative position for legal and accounting purposes, rather than recording these positions on a gross basis with a related collateral receivable or payable. As a result, the tables above reflect a reduction of $183 million of derivative assets and $159 million of derivative liabilities as of December 31, 2018, that previously were reported on a gross basis but are now settled and not subject to collateral.

The above fair values also include adjustments when necessary for counterparty credit risk for both when we are exposed to the counterparty, net of collateral postings, and when the counterparty is exposed to us, net of collateral postings. The net adjustments decreased the asset position at December 31, 2018 and December 31, 2017 by $26 million and $6 million, respectively. In addition, the above fair values reflect adjustments for illiquid derivatives as indicated by a wide bid/ask spread in the interest rate indices to which the derivatives are indexed. These adjustments decreased the overall net asset positions at December 31, 2018 and December 31, 2017 by $19 million and $30 million, respectively.

	Cash Flow		Fair Value		Trading		Total	
(Dollars in billions)	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2017
Notional Values:								
Interest rate swaps	$ 21.4	$ 24.1	$ 10.3	$ 12.4	$ 66.9	$ 72.0	$ 98.6	$ 108.5
Floor Income Contracts	—	—	—	—	27.9	21.9	27.9	21.9
Cross-currency interest rate swaps	—	—	4.5	6.7	.2	.3	4.7	7.0
Other[1]	—	—	—	—	.2	.5	.2	.5
Total derivatives	$ 21.4	$ 24.1	$ 14.8	$ 19.1	$ 95.2	$ 94.7	$ 131.4	$ 137.9

(1) "Other" includes derivatives related to our Total Return Swap Facility.

Impact of Derivatives on Consolidated Statements of Income

	Total Gains (Losses)[1] Years Ended December 31,		
(Dollars in millions)	2018	2017	2016
Fair Value Hedges[2]:			
Interest Rate Swaps			
Gains (losses) recognized in net income on derivatives	$ (137)	$ (214)	$ (288)
Gains (losses) recognized in net income on hedged items	162	193	302
Net fair value hedge ineffectiveness gains (losses)	25	(21)	14
Cross currency interest rate swaps			
Gains (losses) recognized in net income on derivatives	(311)	921	(319)
Gains (losses) recognized in net income on hedged items	210	(954)	350
Net fair value hedge ineffectiveness gains (losses)	(101)	(33)	31
Total fair value hedges	(76)	(54)	45
Cash Flow Hedges[2]:			
Interest rate swaps[3]	—	—	—
Total cash flow hedges	—	—	—
Trading			
Interest rate swaps	22	8	29
Floor income contracts	15	81	51
Cross currency interest rate swaps	(3)	2	5
Other	4	(15)	(13)
Total trading derivatives	38	76	72
Gains (losses) on derivative and hedging activities, net	$ (38)	$ 22	$ 117

(1) Recorded in "Gains (losses) on derivative and hedging activities, net" in the consolidated statements of income.

(2) The accrued interest income (expense) on fair value hedges and cash flow hedges is recorded in net interest income (expense) and is excluded from this table.

(3) Represents ineffectiveness related to cash flow hedges.

7. Derivative Financial Instruments (Continued)

Impact of Derivatives on Consolidated Statements of Changes in Stockholders' Equity (net of tax)

	Years Ended December 31,		
(Dollars in millions)	**2018**	**2017**	**2016**
Total gains (losses) on cash flow hedges	$ 50	$ 25	$ 26
Reclassification adjustments for derivative (gains) losses included in net income (interest expense)[(1)(2)]	(11)	30	31
Total change in stockholders' equity for unrealized gains (losses) on derivatives	$ 39	$ 55	$ 57

(1) Includes net settlement income/expense.
(2) We expect to reclassify $3 million of after-tax net losses from accumulated other comprehensive income to earnings during the next 12 months related to amortization of terminated hedge relationships.

Collateral

The following table details collateral held and pledged related to derivative exposure between us and our derivative counterparties.

(Dollars in millions)	December 31, 2018	December 31, 2017
Collateral held:		
Cash (obligation to return cash collateral is recorded in short-term borrowings)	$ 266	$ 536
Securities at fair value — corporate derivatives (not recorded in financial statements)[(1)]	—	—
Securities at fair value — on-balance sheet securitization derivatives (not recorded in financial statements)[(2)]	90	297
Total collateral held	$ 356	$ 833
Derivative asset at fair value including accrued interest	$ 210	$ 618
Collateral pledged to others:		
Cash (right to receive return of cash collateral is recorded in investments)	$ 188	$ 235
Total collateral pledged	$ 188	$ 235
Derivative liability at fair value including accrued interest and premium receivable	$ 752	$ 659

(1) The Company has the ability to sell or re-pledge securities it holds as collateral.
(2) The trusts do not have the ability to sell or re-pledge securities they hold as collateral.

Our corporate derivatives contain credit contingent features. At our current unsecured credit rating, we have fully collateralized our corporate derivative liability position (including accrued interest and net of premiums receivable) of $87 million with our counterparties. Downgrades in our unsecured credit rating would not result in any additional collateral requirements. Trust related derivatives do not contain credit contingent features related to our or the trusts' credit ratings.

8. Other Assets

The following table provides the detail of our other assets.

(Dollars in millions)	December 31, 2018	December 31, 2017
Accrued interest receivable	$ 1,999	$ 1,965
Benefit and insurance-related investments	470	481
Income tax asset, net (current and deferred)	271	380
Derivatives at fair value	157	438
Fixed assets, net	136	156
Accounts receivable	95	108
Other loans, net	69	59
Other	207	438
Total	$ 3,404	$ 4,025

9. Stockholders' Equity

Common Stock

Our shareholders have authorized the issuance of 1.125 billion shares of common stock. The par value of Navient common stock is $0.01 per share. At December 31, 2018, 247 million shares were issued and outstanding and 22 million shares were unissued but encumbered for outstanding stock options, restricted stock units, performance stock units and dividend equivalent units for employee compensation and remaining authority for stock-based compensation plans. The stock-based compensation plans are described in "Note 11 — Stock-Based Compensation Plans and Arrangements."

Dividend and Share Repurchase Program

In 2018, 2017 and 2016, we paid full-year common stock dividends of $0.64 per share.

In 2018, 2017 and 2016, we repurchased 17.4 million, 29.6 million and 59.6 million shares of common stock, respectively, for $220 million, $440 million and $755 million, respectively. Our board of directors authorized a new $500 million share repurchase program in September 2018. As of December 31, 2018, the remaining common share repurchase authority was $440 million.

The following table summarizes our common share repurchases and issuances.

	Years Ended December 31,		
	2018	2017	2016
Common stock repurchased[(1)]	17,443,351	29,646,374	59,625,325
Average purchase price per share	$ 12.64	$ 14.85	$ 12.68
Shares repurchased related to employee stock-based compensation plans[(2)]	3,829,629	1,847,651	3,197,355
Average purchase price per share	$ 13.71	$ 15.40	$ 13.21
Common shares issued[(3)]	5,659,681	3,680,479	5,476,010

(1) Common shares purchased under our share repurchase program.
(2) Comprises shares withheld from stock option exercises and vesting of restricted stock for employees' tax withholding obligations and shares tendered by employees to satisfy option exercise costs.
(3) Common shares issued under our various compensation and benefit plans.

The closing price of our common stock on December 31, 2018 was $8.81.

10. Earnings (Loss) per Common Share

Basic earnings (loss) per common share ("EPS") are calculated using the weighted average number of shares of common stock outstanding during each period. A reconciliation of the numerators and denominators of the basic and diluted EPS calculations follows.

	Years Ended December 31,		
(In millions, except per share data)	**2018**	**2017**	**2016**
Numerator:			
Net income	$ 395	$ 292	$ 681
Denominator:			
Weighted average shares used to compute basic EPS	260	275	316
Effect of dilutive securities:			
Dilutive effect of stock options, restricted stock, restricted stock units, performance stock units and Employee Stock Purchase Plan ("ESPP")(1)	4	6	6
Dilutive potential common shares(2)	4	6	6
Weighted average shares used to compute diluted EPS	264	281	322
Basic earnings per common share	$ 1.52	$ 1.06	$ 2.15
Diluted earnings per common share	$ 1.49	$ 1.04	$ 2.12

(1) Includes the potential dilutive effect of additional common shares that are issuable upon exercise of outstanding stock options, restricted stock, restricted stock units, performance stock units and the outstanding commitment to issue shares under applicable ESPPs, determined by the treasury stock method.

(2) For the years ended December 31, 2018, 2017 and 2016, stock options covering approximately 6 million, 5 million and 4 million shares, respectively, were outstanding but not included in the computation of diluted earnings per share because they were anti-dilutive.

11. Stock-Based Compensation Plans and Arrangements

We have one active stock-based incentive plan that provides for grants of equity awards to our employees and non-employee directors in various forms including stock options, restricted stock awards, restricted stock units and performance stock units. We also maintain an ESPP. Shares issued under these plans may be either shares reacquired by us or shares that are authorized but unissued. Our Navient Corporation 2014 Omnibus Incentive Plan became effective on April 7, 2014, and 55 million shares are authorized to be issued from this plan as of December 31, 2018. Our Navient Corporation ESPP became effective on May 1, 2014, and 1 million shares are authorized to be issued from this plan as of December 31, 2018.

For most awards, expense generally is recognized ratably over the vesting period net of estimated forfeitures, unless the employee meets certain retirement eligibility criteria. For employee awards that meet retirement eligibility criteria, we record the expense generally upon grant and for employees that become retirement eligible during the vesting period, we recognize expense from the grant date to the date on which the employee becomes retirement eligible. The total stock-based compensation cost recognized in 2018, 2017 and 2016 was $25 million, $35 million and $26 million, respectively. As of December 31, 2018, there was $12 million of total unrecognized compensation expense related to unvested stock awards, which is expected to be recognized over a weighted average period of 1.8 years.

11. Stock-Based Compensation Plans and Arrangements (Continued)

Stock Options

The exercise price of stock options equals the fair market value of our common stock on the date of grant. The maximum contractual term for stock options is 5 years for grants made since 2012, and 10 years for grants made prior to 2012. Most stock options are time-vested, with one-third vesting per year beginning with the first anniversary of the grant date.

The fair values of the options granted in 2018, 2017 and 2016 were estimated as of the grant date using a Black-Scholes option pricing model with the following weighted average assumptions:

	Years Ended December 31,		
	2018	2017	2016
Expected life of the option	3.2 years	3.0 years	3.0 years
Expected volatility	36%	34%	30%
Risk-free interest rate	2.27%	1.44%	.90%
Expected dividend rate	4.70%	4.13%	6.97%
Weighted average fair value of options granted	$ 2.59	$ 2.69	$ 1.01

The expected life is based in general on observed historical exercise patterns of SLM Corporation's employees pre-Spin-Off (excluding employees who transitioned to SLM Bank) and Navient's employees post-Spin-Off. The expected volatility is based in general on implied volatility from publicly-traded options on our stock at the grant date and historical volatility of our stock consistent with the expected life of the option. The risk-free interest rate is based on the U.S. Treasury spot rate at the grant date consistent with the expected life of the option. The dividend yield is based on the projected annual dividend payment per share based on the dividend amount at the grant date, divided by the stock price at the grant date.

The following table summarizes Navient's stock option activity in 2018.

(Dollars in millions, except per share data)	Number of Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value[(1)]
Outstanding at December 31, 2017	14,183,726	$ 12.48		
Granted	1,551,307	13.63		
Exercised[(2)]	(3,715,212)	10.53		
Canceled	(844,931)	16.69		
Outstanding at December 31, 2018[(3)]	11,174,890	$ 12.97	1.8 yrs.	$ 4
Exercisable at December 31, 2018	7,500,940	$ 13.24	1.2 yrs.	$ 4

(1) The aggregate intrinsic value represents the total intrinsic value (the aggregate difference between our closing stock price on December 31, 2018 and the exercise price of in-the-money options) that would have been received by the option holders if all in-the-money options had been exercised on December 31, 2018.

(2) The total intrinsic value of Navient stock options exercised was $12 million, $9 million and $13 million for 2018, 2017 and 2016, respectively.

(3) As of December 31, 2018, there was $1 million of unrecognized compensation cost related to stock options, which is expected to be recognized over a weighted average period of 1.9 years.

Restricted Stock

Restricted stock awards generally are granted to non-employee directors and generally vest upon the director's election to the board. Outstanding restricted stock is entitled to dividend equivalent units that vest subject to the same vesting requirements or lapse of transfer restrictions, as applicable, as the underlying restricted stock award. The fair value of restricted stock awards is based on our stock price at the grant date.

11. Stock-Based Compensation Plans and Arrangements (Continued)

The following table summarizes Navient's restricted stock activity in 2018.

	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2017	—	$ —
Granted	55,503	13.56
Vested[1]	(36,429)	13.52
Canceled	(19,074)	13.63
Non-vested at December 31, 2018[2]	—	$ —

(1) The total fair value of Navient shares that vested was $1 million, $1 million and $1 million for 2018, 2017 and 2016, respectively.
(2) As of December 31, 2018, there was no unrecognized compensation cost related to restricted stock.

Restricted Stock Units and Performance Stock Units

Restricted stock units ("RSUs") and performance stock units ("PSUs") are equity awards granted to employees that entitle the holder to shares of our common stock when the award vests. RSUs generally are time-vested, with one-third vesting per year beginning with the first anniversary of the grant date, while PSUs vest based on achieving certain corporate performance goals over a three-year performance period. Outstanding RSUs and PSUs are entitled to dividend equivalent units that vest subject to the same vesting requirements as the underlying award. The fair value of RSUs and PSUs is based on our stock price at the grant date.

The following table summarizes Navient's RSU and PSU activity in 2018.

	Number of RSUs/PSUs	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2017	4,428,305	$ 13.33
Granted	1,884,580	12.97
Vested and converted to common stock[1]	(1,598,227)	13.87
Forfeited	(226,323)	21.65
Canceled	(228,564)	12.89
Outstanding at December 31, 2018[2]	4,259,771	$ 12.55

(1) The total fair value of Navient RSUs and PSUs that vested and converted to common stock was $22 million, $23 million and $30 million for 2018, 2017 and 2016, respectively.
(2) As of December 31, 2018, there was $11 million of unrecognized compensation cost related to RSUs and PSUs, which is expected to be recognized over a weighted average period of 1.8 years.

12. Fair Value Measurements

We use estimates of fair value in applying various accounting standards for our financial statements. We categorize our fair value estimates based on a hierarchical framework associated with three levels of price transparency utilized in measuring financial instruments at fair value.

Education Loans

Our FFELP Loans and Private Education Loans are accounted for at cost or at the lower of cost or market if the loan is held-for-sale. Fair values were determined by modeling loan cash flows using stated terms of the assets and internally-developed assumptions to determine aggregate portfolio yield, net present value and average life.

FFELP Loans

The significant assumptions used to determine fair value of our FFELP Loans are prepayment speeds, default rates, cost of funds, discount rate, capital levels and expected Repayment Borrower Benefits to be earned. In addition, the Floor Income component of our FFELP Loan portfolio is valued with option models using both observable market inputs and internally developed inputs. A number of significant inputs into the models are internally derived and not observable in active markets. While the resulting fair value can be validated against market transactions where we are a participant, these markets are not considered active. As such, these are level 3 valuations.

Private Education Loans

The significant assumptions used to determine fair value of our Private Education Loans are prepayment speeds, default rates, recovery rates, cost of funds, discount rate and capital levels. A number of significant inputs into the models are internally derived and not observable in active markets. While the resulting fair value can be validated against market transactions where we are a participant, these markets are not considered active. As such, these are level 3 valuations.

Cash and Investments (Including "Restricted Cash and Investments")

Cash and cash equivalents are carried at cost. Carrying value approximates fair value. The fair value of investments in commercial paper, asset-backed commercial paper, or demand deposits that have a remaining term of less than 90 days when purchased are estimated to equal their cost and, when needed, adjustments for liquidity and credit spreads are made depending on market conditions and counterparty credit risks. No additional adjustments were deemed necessary. These are level 2 valuations.

Borrowings

Borrowings are accounted for at cost in the financial statements except when denominated in a foreign currency or when designated as the hedged item in a fair value hedge relationship. When the hedged risk is the benchmark interest rate (which for us is LIBOR) and not full fair value, the cost basis is adjusted for changes in value due to benchmark interest rates only. Foreign currency-denominated borrowings are re-measured at current spot rates in the financial statements. The full fair value of all borrowings is disclosed. Fair value was determined through standard bond pricing models and option models (when applicable) using the stated terms of the borrowings, observable yield curves, foreign currency exchange rates, volatilities from active markets or from quotes from broker-dealers. Fair value adjustments for unsecured corporate debt are made based on indicative quotes from observable trades and spreads on credit default swaps specific to the Company. Fair value adjustments for secured borrowings are based on indicative quotes from broker-dealers. These adjustments for both secured and unsecured borrowings are material to the overall valuation of these items and, currently, are based on inputs from inactive markets. As such, these are level 3 valuations.

12. Fair Value Measurements (Continued)

Derivative Financial Instruments

All derivatives are accounted for at fair value in the financial statements. The fair value of a majority of derivative financial instruments was determined by standard derivative pricing and option models using the stated terms of the contracts and observable market inputs. In some cases, we utilized internally developed inputs that are not observable in the market, and as such, classified these instruments as level 3 fair values. Complex structured derivatives or derivatives that trade in less liquid markets require significant estimates and judgment in determining fair value that cannot be corroborated with market transactions.

When determining the fair value of derivatives, we take into account counterparty credit risk for positions where there is exposure to the counterparty on a net basis by assessing exposure net of collateral held. The net exposures for each counterparty are adjusted based on market information available for the specific counterparty, including spreads from credit default swaps. When the counterparty has exposure to us under derivatives with us, we fully collateralize the exposure, minimizing the adjustment necessary to the derivative valuations for our credit risk. While trusts that contain derivatives are not required to post collateral, when the counterparty is exposed to the trust the credit quality and securitized nature of the trusts minimizes any adjustments for the counterparty's exposure to the trusts. The net credit risk adjustment (adjustments for our exposure to counterparties net of adjustments for the counterparties' exposure to us) decreased the valuations at December 31, 2018 by $26 million.

Inputs specific to each class of derivatives disclosed in the table below are as follows:

- Interest rate swaps — Derivatives are valued using standard derivative cash flow models. Derivatives that swap fixed interest payments for LIBOR interest payments (or vice versa) and derivatives swapping quarterly reset LIBOR for daily reset LIBOR or one-month LIBOR were valued using the LIBOR swap yield curve which is an observable input from an active market. These derivatives are level 2 fair value estimates in the hierarchy. Other derivatives swapping LIBOR interest payments for another variable interest payment (primarily Prime) are valued using the LIBOR swap yield curve and observable market spreads for the specified index. The markets for these swaps are generally illiquid as indicated by a wide bid/ask spread. The adjustment made for liquidity decreased the valuations by $19 million at December 31, 2018. These derivatives are level 3 fair value estimates.
- Cross-currency interest rate swaps — Derivatives are valued using standard derivative cash flow models. Derivatives hedging foreign-denominated bonds are valued using the LIBOR swap yield curve (for both USD and the foreign-denominated currency), cross-currency basis spreads and forward foreign currency exchange rates. These inputs are observable inputs from active markets. Therefore, the resulting valuation is a level 2 fair value estimate. Amortizing notional derivatives (derivatives whose notional amounts change based on changes in the balance of, or pool of, assets or debt) hedging trust debt use internally derived assumptions for the trust assets' prepayment speeds and default rates to model the notional amortization. Management makes assumptions concerning the extension features of derivatives hedging rate-reset notes denominated in a foreign currency. These inputs are not market observable; therefore, these derivatives are level 3 fair value estimates.
- Floor Income Contracts — Derivatives are valued using an option pricing model. Inputs to the model include the LIBOR swap yield curve and LIBOR interest rate volatilities. The inputs are observable inputs in active markets and these derivatives are level 2 fair value estimates.

The carrying value of borrowings designated as the hedged item in a fair value hedge is adjusted for changes in fair value due to benchmark interest rates and foreign-currency exchange rates. These valuations are determined through standard bond pricing models and option models (when applicable) using the stated terms of the borrowings, and observable yield curves, foreign currency exchange rates and volatilities.

12. Fair Value Measurements (Continued)

The following table summarizes the valuation of our financial instruments that are marked-to-market on a recurring basis. During 2018 and 2017, there were no significant transfers of financial instruments between levels.

	Fair Value Measurements on a Recurring Basis							
	December 31, 2018				December 31, 2017			
(Dollars in millions)	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets								
Available-for-sale investments:								
Other	$ —	$ —	$ —	$ —	$ —	$ 2	$ —	$ 2
Total available-for-sale investments	—	—	—	—	—	2	—	2
Derivative instruments:[1]								
Interest rate swaps	—	171	2	173	—	388	4	392
Cross-currency interest rate swaps	—	—	6	6	—	—	88	88
Total derivative assets[2]	—	171	8	179	—	388	92	480
Total	$ —	$ 171	$ 8	$ 179	$ —	$ 390	$ 92	$ 482
Liabilities[3]								
Derivative instruments[1]								
Interest rate swaps	$ —	$ (50)	$ (29)	$ (79)	$ —	$ (144)	$ (45)	$ (189)
Floor Income Contracts	—	(53)	—	(53)	—	(74)	—	(74)
Cross-currency interest rate swaps	—	(26)	(639)	(665)	—	(44)	(410)	(454)
Other	—	—	(4)	(4)	—	—	(18)	(18)
Total derivative liabilities[2]	—	(129)	(672)	(801)	—	(262)	(473)	(735)
Total	$ —	$ (129)	$ (672)	$ (801)	$ —	$ (262)	$ (473)	$ (735)

(1) Fair value of derivative instruments excludes accrued interest and the value of collateral.

(2) See "Note 7 — Derivative Financial Instruments" for a reconciliation of gross positions without the impact of master netting agreements to the balance sheet classification.

(3) Borrowings which are the hedged items in a fair value hedge relationship and which are adjusted for changes in value due to benchmark interest rates only are not carried at full fair value and are not reflected in this table.

12. Fair Value Measurements (Continued)

The following tables summarize the change in balance sheet carrying value associated with level 3 financial instruments carried at fair value on a recurring basis.

	Year Ended December 31, 2018			
	Derivative Instruments			
(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
Balance, beginning of period	$ (41)	$ (322)	$ (18)	$ (381)
Total gains/(losses):				
Included in earnings[(1)]	11	(433)	8	(414)
Included in other comprehensive income	—	—	—	—
Settlements	3	122	6	131
Transfers in and/or out of level 3	—	—	—	—
Balance, end of period	$ (27)	$ (633)	$ (4)	$ (664)
Change in mark-to-market gains/(losses) relating to instruments still held at the reporting date[(2)]	$ 13	$ (284)	$ 14	$ (257)

	Year Ended December 31, 2017			
	Derivative Instruments			
(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
Balance, beginning of period	$ (46)	$ (1,243)	$ (13)	$ (1,302)
Total gains/(losses):				
Included in earnings[(1)]	—	803	(15)	788
Included in other comprehensive income	—	—	—	—
Settlements	5	118	10	133
Transfers in and/or out of level 3	—	—	—	—
Balance, end of period	$ (41)	$ (322)	$ (18)	$ (381)
Change in mark-to-market gains/(losses) relating to instruments still held at the reporting date[(2)]	$ 5	$ 795	$ (5)	$ 795

	Year Ended December 31, 2016			
	Derivative Instruments			
(Dollars in millions)	Interest Rate Swaps	Cross Currency Interest Rate Swaps	Other	Total Derivative Instruments
Balance, beginning of period	$ (44)	$ (903)	$ (2)	$ (949)
Total gains/(losses):				
Included in earnings[(1)]	3	(428)	(14)	(439)
Included in other comprehensive income	—	—	—	—
Settlements	3	88	3	94
Transfers in and/or out of level 3[(3)]	(8)	—	—	(8)
Balance, end of period	$ (46)	$ (1,243)	$ (13)	$ (1,302)
Change in mark-to-market gains/(losses) relating to instruments still held at the reporting date[(2)]	$ 7	$ (340)	$ (11)	$ (344)

(1) "Included in earnings" is comprised of the following amounts recorded in the specified line item in the consolidated statements of income:

	Years Ended December 31,		
(Dollars in millions)	2018	2017	2016
Gains (losses) on derivative and hedging activities, net	$ (292)	$ 906	$ (351)
Interest expense	(122)	(118)	(88)
Total	$ (414)	$ 788	$ (439)

(2) Recorded in "gains (losses) on derivative and hedging activities, net" in the consolidated statements of income.

(3) Consumer Price Index/LIBOR basis swaps were transferred from level 3 to level 2 in the fourth quarter of 2016 due to the conclusion that these swaps now trade in an active market.

12. Fair Value Measurements (Continued)

The following table presents the significant inputs that are unobservable or from inactive markets used in the recurring valuations of the level 3 financial instruments detailed above.

(Dollars in millions)	Fair Value at December 31, 2018	Valuation Technique	Input	Range (Weighted Average)
Derivatives				
Prime/LIBOR basis swaps	$ (27)	Discounted cash flow	Constant Prepayment Rate	7%
			Bid/ask adjustment to discount rate	.08% — .08% (.08%)
Cross-currency interest rate swaps	(633)	Discounted cash flow	Constant Prepayment Rate	4%
Other	(4)			
Total	$ (664)			

The significant inputs that are unobservable or from inactive markets related to our level 3 derivatives detailed in the table above would be expected to have the following impacts to the valuations:

- Prime/LIBOR basis swaps — These swaps do not actively trade in the markets as indicated by a wide bid/ask spread. A wider bid/ask spread will result in a decrease in the overall valuation. In addition, the unobservable inputs include Constant Prepayment Rates of the underlying securitization trust the swap references. A decrease in this input will result in a longer weighted average life of the swap which will increase the value for swaps in a gain position and decrease the value for swaps in a loss position, everything else equal. The opposite is true for an increase in the input.
- Cross-currency interest rate swaps — The unobservable inputs used in these valuations are Constant Prepayment Rates of the underlying securitization trust the swap references. A decrease in this input will result in a longer weighted average life of the swap. All else equal in a typical currency market, this will result in a decrease to the valuation due to the delay in the cash flows of the currency exchanges as well as diminished liquidity in the forward exchange markets as you increase the term. The opposite is true for an increase in the input.

12. Fair Value Measurements (Continued)

The following table summarizes the fair values of our financial assets and liabilities, including derivative financial instruments.

	December 31, 2018			December 31, 2017		
(Dollars in millions)	Fair Value	Carrying Value	Difference	Fair Value	Carrying Value	Difference
Earning assets						
FFELP Loans	$ 72,074	$ 72,253	$ (179)	$ 82,271	$ 81,703	$ 568
Private Education Loans	22,958	22,245	713	24,421	23,419	1,002
Cash and investments[1]	5,488	5,488	—	5,034	5,034	—
Total earning assets	100,520	99,986	534	111,726	110,156	1,570
Interest-bearing liabilities						
Short-term borrowings	5,418	5,422	4	4,783	4,771	(12)
Long-term borrowings	92,173	93,519	1,346	104,921	105,012	91
Total interest-bearing liabilities	97,591	98,941	1,350	109,704	109,783	79
Derivative financial instruments						
Floor Income Contracts	(53)	(53)	—	(74)	(74)	—
Interest rate swaps	94	94	—	203	203	—
Cross-currency interest rate swaps	(659)	(659)	—	(366)	(366)	—
Other	(4)	(4)	—	(18)	(18)	—
Excess of net asset fair value over carrying value			$ 1,884			$ 1,649

(1) "Cash and investments" includes available-for-sale investments whose cost basis is $0 million and $2 million at December 31, 2018 and 2017, respectively, versus a fair value of $0 million and $2 million at December 31, 2018 and 2017, respectively.

13. Commitments, Contingencies and Guarantees

Legal Proceedings

The Company has been named as defendant in a number of putative class action cases alleging violations of various state and federal consumer protection laws including the Telephone Consumer Protection Act ("TCPA"), the Consumer Financial Protection Act of 2010 ("CFPA"), the Fair Credit Reporting Act ("FCRA"), the Fair Debt Collection Practices Act ("FDCPA") and various other state consumer protection laws.

In January 2017, the Consumer Financial Protection Bureau (the "CFPB") and Attorneys General for the State of Illinois and the State of Washington initiated civil actions naming Navient Corporation and several of its subsidiaries as defendants alleging violations of certain Federal and State consumer protection statutes, including the CFPA, FCRA, FDCPA and various state consumer protection laws. In October 2017, the Attorney General for the Commonwealth of Pennsylvania initiated a civil action against Navient Corporation and Navient Solutions, LLC ("Solutions"), containing similar alleged violations of the CFPA and the Pennsylvania Unfair Trade Practices and Consumer Protection Law. Additionally, the Attorneys General for the States of California and Mississippi recently initiated similar actions against the Company and certain subsidiaries alleging violations of various state and federal consumer protection laws. We refer to the Illinois, Pennsylvania, Washington, California, and Mississippi Attorneys General collectively as the "State Attorneys General." In addition to these matters, a number of lawsuits have been filed by nongovernmental parties or, in the future, may be filed by additional governmental or nongovernmental parties seeking damages or other remedies related to similar issues raised by the CFPB and the State Attorneys General. As the Company has previously stated, we believe the suits improperly seek to impose penalties on Navient based on new, unannounced servicing standards applied retroactively only against one servicer, and that the allegations are false. We therefore have denied these allegations and intend to vigorously defend against the allegations in each of these cases. For additional information on these civil actions, please refer to section entitled "Regulatory Matters" below.

13. Commitments, Contingencies and Guarantees (Continued)

At this point in time, the Company is unable to anticipate the timing of a resolution or the impact that these legal proceedings may have on the Company's consolidated financial position, liquidity, results of operation or cash flows. As a result, it is not possible at this time to estimate a range of potential exposure, if any, for amounts that may be payable in connection with these matters and reserves have not been established. It is possible that an adverse ruling or rulings may have a material adverse impact on the Company.

Regulatory Matters

In addition, Navient and its subsidiaries are subject to examination or regulation by the SEC, CFPB, FFIEC, ED and various state agencies as part of its ordinary course of business. Items or matters similar to or different from those described above may arise during the course of those examinations. We also routinely receive inquiries or requests from various regulatory entities or bodies or government agencies concerning our business or our assets. Generally, the Company endeavors to cooperate with each such inquiry or request.

As previously disclosed, the Company and various of its subsidiaries have been subject to the following investigations and inquiries:

- In December 2013, Navient received Civil Investigative Demands ("CIDs") issued by the Illinois Attorney General, the Washington Attorney General and multiple other state Attorneys General. According to the CIDs, the investigations were initiated to ascertain whether any practices declared to be unlawful under the Consumer Fraud and Deceptive Business Practices Act have occurred or are about to occur. The Company subsequently received separate but similar CIDs or subpoenas from the Attorneys General for the District of Columbia, Kansas, Oregon, Colorado, New Jersey and New York. We may receive additional CIDs or subpoenas from these or other Attorneys General with respect to similar or different matters.
- In April 2014, Solutions received a CID from the CFPB as part of the CFPB's separate investigation regarding allegations relating to Navient's disclosures and assessment of late fees and other matters. Navient has received a series of supplemental CIDs on these matters. In August 2015, Solutions received a letter from the CFPB notifying Solutions that, in accordance with the CFPB's discretionary Notice and Opportunity to Respond and Advise ("NORA") process, the CFPB's Office of Enforcement was considering recommending that the CFPB take legal action against Solutions. The NORA letter related to a previously disclosed investigation into Solutions' disclosures and assessment of late fees and other matters and states that, in connection with any action, the CFPB may seek restitution, civil monetary penalties and corrective action against Solutions. The Company responded to the NORA letter in September 2015.
- In November 2014, Navient's subsidiary, Pioneer Credit Recovery, Inc. ("Pioneer"), received a CID from the CFPB as part of an investigation regarding Pioneer's activities relating to rehabilitation loans and collection of defaulted student debt.
- In December 2014, Solutions received a subpoena from the New York Department of Financial Services (the "NY DFS") as part of the NY DFS's inquiry with regard to whether persons or entities have engaged in fraud or misconduct with respect to a financial product or service under New York Financial Services Law or other laws.

In January 2017, the CFPB initiated a civil action naming Navient Corporation and several of its subsidiaries as defendants alleging violations of Federal and State consumer protection statutes, including the DFPA, FCRA, FDCPA and various state consumer protection laws. The CFPB, Washington Attorney General and Illinois Attorney General lawsuits relate to matters which were covered under the CIDs or the NORA letter discussed above. In addition, various State Attorneys General have filed suits alleging violations of various state and federal consumer protection laws covering matters similar to those covered by the CIDs or the NORA letter. As stated above, we have denied these allegations and intend to vigorously defend against the allegations in each of these cases.

13. Commitments, Contingencies and Guarantees (Continued)

Under the terms of the Separation and Distribution Agreement between the Company and SLM BankCo, Navient has agreed to indemnify SLM BankCo for all claims, actions, damages, losses or expenses that may arise from the conduct of activities of pre-Spin-Off SLM BankCo occurring prior to the Spin-Off other than those specifically excluded in the Separation and Distribution Agreement. As a result, subject to the terms, conditions and limitations set forth in the Separation and Distribution Agreement, Navient has agreed to indemnify and hold harmless Sallie Mae and its subsidiaries, including Sallie Mae Bank from liabilities arising out of the regulatory matters and CFPB and State Attorneys General lawsuits mentioned above. Navient has asserted various claims for indemnification against Sallie Mae and Sallie Mae Bank for such specifically excluded items arising out of the CFPB and the State Attorneys General lawsuits if and to the extent any indemnified liabilities exist now or in the future. Navient has no additional reserves related to indemnification matters with SLM BankCo as of December 31, 2018.

OIG Audit

The Office of the Inspector General (the "OIG") of ED commenced an audit regarding Special Allowance Payments ("SAP") on September 10, 2007. In September 2013, we received the final audit determination of Federal Student Aid (the "Final Audit Determination") on the final audit report issued by the OIG in August 2009 related to this audit. The Final Audit Determination concurred with the final audit report issued by the OIG and instructed us to make adjustment to our government billing to reflect the policy determination. In August 2016, we filed our notice of appeal to the Administrative Actions and Appeals Service Group of ED. A hearing was held in April 2017 and a ruling has not yet been issued. We continue to believe that our SAP billing practices were proper, considering then-existing ED guidance and lack of applicable regulations. The Company established a reserve for this matter in 2014 and does not believe, at this time, that an adverse ruling would have a material effect on the Company as a whole.

Contingencies

In the ordinary course of business, we and our subsidiaries are defendants in or parties to pending and threatened legal actions and proceedings including actions brought on behalf of various classes of claimants. These actions and proceedings may be based on alleged violations of consumer protection, securities, employment and other laws. In certain of these actions and proceedings, claims for substantial monetary damage are asserted against us and our subsidiaries. We and our subsidiaries are also subject to potential unasserted claims by third parties.

In the ordinary course of business, we and our subsidiaries are subject to regulatory examinations, information gathering requests, inquiries and investigations. In connection with formal and informal inquiries in these cases, we and our subsidiaries receive requests, subpoenas and orders for documents, testimony and information in connection with various aspects of our regulated activities.

We are required to establish reserves for litigation and regulatory matters where those matters present loss contingencies that are both probable and estimable. When loss contingencies are not both probable and estimable, we do not establish reserves.

In view of the inherent difficulty of predicting the outcome of such litigation and regulatory matters, we cannot predict what the eventual outcome of the pending matters will be, what the timing or the ultimate resolution of these matters will be, or what the eventual loss, fines or penalties, if any, related to each pending matter may be.

Based on current knowledge, reserves have been established for certain litigation, regulatory matters, and unasserted contract claims where the loss is both probable and estimable. Based on current knowledge, management does not believe that loss contingencies, if any, arising from pending investigations, litigation or regulatory matters will have a material adverse effect on our consolidated financial position, liquidity, results of operations or cash flows, except as otherwise disclosed.

As of June 30, 2018, we concluded that a contingency loss was no longer probable of occurring. Accordingly, the related $40 million contingency reserve was released as a reduction of operating expenses in the second quarter of 2018.

14. Income Taxes

Reconciliations of the statutory U.S. federal income tax rates to our effective tax rate for continuing operations follow:

	Years Ended December 31,		
	2018	2017	2016
Statutory rate	21.0%	35.0%	35.0%
DTA Remeasurement Loss[1]	—	27.2	—
State tax, net of federal benefit	3.9	.7	3.8
Other, net	.3	(1.1)	(.3)
Effective tax rate	25.2%	61.8%	38.5%

(1) The TCJA, enacted on December 22, 2017, made significant changes to all aspects of income taxation, including a reduction to the corporate federal statutory tax rate. GAAP requires the effects of the TCJA to be recognized in the period the law is enacted, even though the effective date of the law for most provisions is January 1, 2018. The primary impact to us is the reduction to the corporate federal statutory tax rate from 35 percent to 21 percent as of January 1, 2018. This rate reduction required us to remeasure our deferred tax asset at December 31, 2017, at the 21 percent corporate federal statutory tax rate and resulted in a DTA Remeasurement Loss of $208 million for GAAP, which is reflected as incremental income tax expense in the fourth quarter of 2017.

Income tax expense consists of:

	December 31,		
(Dollars in millions)	2018	2017	2016
Current provision/(benefit):			
Federal	$ 71	$ 77	$ 246
State	13	(3)	47
Foreign	3	3	1
Total current provision/(benefit)	87	77	294
Deferred provision/(benefit):			
Federal	33	385	115
State	13	11	18
Foreign	—	(1)	—
Total deferred provision/(benefit)	46	395	133
Provision for income tax expense/(benefit)	$ 133	$ 472	$ 427

14. Income Taxes (Continued)

The tax effect of temporary differences that give rise to deferred tax assets and liabilities include the following:

	December 31,	
(Dollars in millions)	**2018**	**2017**
Deferred tax assets:		
Loan reserves	$ 292	$ 317
Education loan premiums and discounts, net	48	52
Operating loss and credit carryovers	18	22
Stock-based compensation plans	16	18
Accrued expenses not currently deductible	14	24
Other	18	14
Total deferred tax assets	406	447
Deferred tax liabilities:		
Market value adjustments on education loans, investments and derivatives	46	14
Acquired intangible assets	12	3
Original issue discount on borrowings	7	11
Debt repurchases	6	8
Other	13	19
Total deferred tax liabilities	84	55
Net deferred tax assets	$ 322	$ 392

Included in operating loss and credit carryovers is a valuation allowance of $43 million and $42 million as of December 31, 2018 and 2017, respectively, against a portion of the Company’s federal and state deferred tax assets. The valuation allowance is primarily attributable to deferred tax assets for federal and state net operating loss carryforwards that management believes it is more likely than not will expire prior to being realized. The ultimate realization of the deferred tax assets is dependent upon the generation of future taxable income of the appropriate character (i.e. capital or ordinary) during the period in which the temporary differences become deductible. Factors generally considered by management include (but are not limited to): any changes in economic conditions, the scheduled reversals of deferred tax liabilities, and the history of positive taxable income available for net operating loss carrybacks in evaluating the realizability of the deferred tax assets.

As of December 31, 2018, we have gross federal net operating loss (“NOL”) carryforwards of $78 million (which begin to expire in 2031) and gross state NOL carryforwards of $640 million (which begin to expire in 2021). Tax-effected NOL amounts of $16 million (federal) and $42 million (state) have corresponding valuation allowances of $0 million (federal) and $40 million (state).

As of December 31, 2018, we have gross federal and state capital loss carryforwards of $10 million (which begin to expire in 2021). Tax-effected capital loss amount of $3 million (federal and state) has a corresponding valuation allowance of $3 million (federal and state).

14. Income Taxes (Continued)

Accounting for Uncertainty in Income Taxes

The following table summarizes changes in unrecognized tax benefits:

	December 31,		
(Dollars in millions)	**2018**	**2017**	**2016**
Unrecognized tax benefits at beginning of year	$ 57.4	$ 73.0	$ 56.3
Increases resulting from tax positions taken during a prior period	8.0	.7	19.9
Decreases resulting from tax positions taken during a prior period	(.3)	(1.8)	(5.6)
Increases resulting from tax positions taken during the current period	3.8	4.4	4.4
Decreases related to settlements with taxing authorities	(1.4)	(5.1)	(.1)
Increases related to settlements with taxing authorities	—	—	—
Reductions related to the lapse of statute of limitations	(1.8)	(13.8)	(1.9)
Unrecognized tax benefits at end of year	$ 65.7	$ 57.4	$ 73.0

As of December 31, 2018, the gross unrecognized tax benefits are $65.7 million. Included in the $65.7 million are $51.9 million of unrecognized tax benefits that, if recognized, would favorably impact the effective tax rate.

The Company or one of its subsidiaries files income tax returns at the U.S. federal level, in most U.S. states, and various foreign jurisdictions. All periods prior to 2015 are closed for federal examination purposes. Various combinations of subsidiaries, tax years, and jurisdictions remain open for review, subject to statute of limitations periods (typically 3 to 4 prior years). We do not expect the resolution of open audits to have a material impact on our unrecognized tax benefits.

15. Revenue from Contracts with Customers Accounted in Accordance with ASC 606

We account for certain contract revenue in accordance with ASC 606. Servicing contract revenue is not accounted for under ASC 606. Contract revenue earned by our Federal Education Loans segment is derived from asset recovery activities related to the collection of delinquent education loans on behalf of ED, Guarantor agencies and other institutions. Revenue earned by our Business Processing segment is derived from government services, which includes receivables management services and account processing solutions, and healthcare services, which includes revenue cycle management services.

Most of our revenue is derived from long-term contracts, the duration of which is expected to span more than one year. These contracts are billable monthly, as services are rendered, based on a percentage of the balance collected or the transaction processed, a flat fee per transaction or a stated rate per the service performed. In accordance with ASC 606, the unit of account is a contractual performance obligation, a promise to provide a distinct good or service to a customer. The transaction price is allocated to each distinct performance obligation when or as the good or service is transferred to the customer and the obligation is satisfied. Distinct performance obligations are identified based on the services specified in the contract that are capable of being distinct such that the customer can benefit from the service on its own or together with other resources that are available from the Company or a third party, and are also distinct in the context of the contract such that the transfer of the services is separately identifiable from other services promised in the contract. Most of our contracts include integrated service offerings that include obligations that are not separately identifiable and distinct in the context of our contracts. Accordingly, our contracts generally have a single performance obligation. A limited number of full service offerings include multiple performance obligations.

Substantially all our revenue from contracts with customers is variable revenue which is recognized over time as our customers receive and consume the benefit of our services in an amount consistent with monthly billings. Accordingly, we do not disclose variable consideration associated with the remaining performance obligation as we have recognized revenue in the amount we have the right to invoice for services performed. Our fees correspond to the value the customer has realized from our performance of each increment of the service (for example, an individual transaction processed or collection of a past due balance).

15. Revenue from Contracts with Customers Accounted in Accordance with ASC 606 (Continued)

The following tables illustrate the disaggregation of revenue from contracts accounted for under ASC 606 with customers according to service type and client type by reportable operating segment.

Revenue by Service Type

	Year Ended December 31, 2018		
(Dollars in millions)	Federal Education Loans	Business Processing	Total Revenue
Federal Education Loan asset recovery services	$ 91	$ —	$ 91
Government services	—	175	175
Healthcare services	—	93	93
Total	$ 91	$ 268	$ 359

Revenue by Client Type

	Year Ended December 31, 2018		
(Dollars in millions)	Federal Education Loans	Business Processing	Total Revenue
Federal government	$ 21	$ 7	$ 28
Guarantor agencies	58	—	58
Other institutions	12	—	12
State and local government	—	92	92
Tolling authorities	—	76	76
Hospitals and other healthcare providers	—	93	93
Total	$ 91	$ 268	$ 359

As of January 1, 2018, and December 31, 2018, there was $63 million and $74 million, respectively, of net accounts receivable related to these contracts. Navient had no material contract assets or contract liabilities.

16. Segment Reporting

In the fourth quarter of 2017, Navient entered the Private Education Refinance Loan origination market. This new activity changed the way the Company manages the business, reviews operating performance and allocates resources. This resulted in the following four new reportable operating segments, effective first-quarter 2018: (1) Federal Education Loans (2) Consumer Lending (3) Business Processing and (4) Other. In connection with this change in reportable operating segments, there was also a change in how unallocated shared services expense is defined (which was previously referred to as overhead expense).

The following table shows the realignment of our business lines (operating segments) from the prior reportable operating segments to the new reportable operating segments:

Business Lines	New Reportable Operating Segment	Prior Reportable Operating Segment
FFELP Loans	Federal Education Loans	FFELP Loans
Federal Education Loans-Servicing	Federal Education Loans	Business Services
Federal Education Loans-Asset Recovery	Federal Education Loans	Business Services
Private Education Refinance Loans	Consumer Lending	Private Education Loans
Private Education Loans-Other	Consumer Lending	Private Education Loans
Non-Education Government Services	Business Processing	Business Services
Non-Education Healthcare Services	Business Processing	Business Services
Unallocated Shared Services Expenses	Other	Other
Corporate Liquidity Portfolio	Other	Other

These segments meet the quantitative thresholds for reportable operating segments. Accordingly, the results of operations of these reportable operating segments are presented separately. The underlying operating segments are used by the Company's chief operating decision maker to manage the business, review operating performance and allocate resources, and qualify to be aggregated as part of the primary reportable operating segments. As discussed further below, we measure the profitability of our operating segments based on Core Earnings net income. Accordingly, information regarding our reportable operating segments is provided on a Core Earnings basis. As a result of this change in segment reporting in the first quarter of 2018, prior periods have been recast for comparison purposes.

Federal Education Loans Segment

In this segment, Navient holds and acquires FFELP Loans and performs servicing and asset recovery services on its own loan portfolio, federal education loans owned by ED and other institutions. Although FFELP Loans are no longer originated, we continue to pursue acquisitions of FFELP Loan portfolios as well as servicing and asset recovery services contracts. These acquisitions leverage our servicing scale and generate incremental earnings and cash flow. In this segment, we generate revenue primarily through net interest income on the FFELP Loan portfolio (after provision for loan losses) as well as servicing and asset recovery services revenue. This segment is expected to generate significant amounts of earnings and cash flow over the remaining life of the portfolio.

The following table includes GAAP-basis asset information for our Federal Education Loans segment.

	December 31,	
(Dollars in millions)	2018	2017
FFELP Loans, net	$ 72,253	$ 81,703
Cash and investments[1]	3,368	2,821
Other	2,100	2,601
Total assets	$ 77,721	$ 87,125

(1) Includes restricted cash and investments.

16. Segment Reporting (Continued)

Consumer Lending Segment

In this segment, Navient holds, originates and acquires consumer loans and performs servicing activities on its own education loan portfolio. Originations and acquisitions leverage our servicing scale and generate incremental earnings and cash flow. In this segment, we generate revenue primarily through net interest income on the Private Education Loan portfolio (after provision for loan losses). This segment is expected to generate significant amounts of earnings and cash flow over the remaining life of the portfolio.

The following table includes GAAP-basis asset information for our Consumer Lending segment.

	December 31,	
(Dollars in millions)	**2018**	**2017**
Private Education Loans, net	$ 22,245	$ 23,419
Cash and investments[1]	732	706
Other	1,076	1,143
Total assets	$ 24,053	$ 25,268

(1) Includes restricted cash and investments.

Business Processing Segment

In this segment, Navient performs revenue cycle management and business processing services for over 600 non-education related government and healthcare clients. Our integrated solutions technology and superior data driven approach allows state governments, agencies, court systems, municipalities, and toll authorities (Government Services) to reduce their operating expenses while maximizing revenue opportunities. Healthcare services include revenue cycle outsourcing, accounts receivable management, extended business office support and consulting engagements. We offer customizable solutions for our clients that include non-profit/religious-affiliated hospital systems, teaching hospitals, urban medical centers, for-profit healthcare systems, critical access hospitals, children’s hospitals and large physician groups.

At December 31, 2018 and 2017, the Business Processing segment had total assets of $448 million and $466 million, respectively, on a GAAP basis.

Other Segment

Our Other segment primarily consists of our corporate liquidity portfolio and the repurchase of debt, unallocated expenses of shared services, restructuring/other reorganization expenses, and the deferred tax asset remeasurement loss recognized due to the enactment of the TCJA in the fourth quarter of 2017.

Unallocated expenses of shared services are comprised of costs primarily related to certain executive management, the board of directors, accounting, finance, legal, human resources, compliance and risk management, regulatory-related costs, stock-based compensation expense, and information technology costs related to infrastructure and operations. Regulatory-related costs include actual settlement amounts as well as third-party professional fees we incur in connection with regulatory matters.

At December 31, 2018 and 2017, the Other segment had total assets of $2.0 billion and $2.1 billion, respectively, on a GAAP basis.

16. Segment Reporting (Continued)

Measure of Profitability

We prepare financial statements and present financial results in accordance with GAAP. However, we also evaluate our business segments and present financial results on a basis that differs from GAAP. We refer to this different basis of presentation as Core Earnings. We provide this Core Earnings basis of presentation on a consolidated basis and for each business segment because this is what we review internally when making management decisions regarding our performance and how we allocate resources. We also refer to this information in our presentations with credit rating agencies, lenders and investors. Because our Core Earnings basis of presentation corresponds to our segment financial presentations, we are required by GAAP to provide Core Earnings disclosure in the notes to our consolidated financial statements for our business segments.

Core Earnings are not a substitute for reported results under GAAP. We use Core Earnings to manage our business segments because Core Earnings reflect adjustments to GAAP financial results for two items, discussed below, that are mostly due to timing factors generally beyond the control of management. Accordingly, we believe that Core Earnings provide management with a useful basis from which to better evaluate results from ongoing operations against the business plan or against results from prior periods. Consequently, we disclose this information because we believe it provides investors with additional information regarding the operational and performance indicators that are most closely assessed by management. When compared to GAAP results, the two items we remove to result in our Core Earnings presentations are:

1. Mark-to-market gains/losses resulting from our use of derivative instruments to hedge our economic risks that do not qualify for hedge accounting treatment or do qualify for hedge accounting treatment but result in ineffectiveness; and
2. The accounting for goodwill and acquired intangible assets.

While GAAP provides a uniform, comprehensive basis of accounting, for the reasons described above, our Core Earnings basis of presentation does not. Core Earnings are subject to certain general and specific limitations that investors should carefully consider. For example, there is no comprehensive, authoritative guidance for management reporting. Our Core Earnings are not defined terms within GAAP and may not be comparable to similarly titled measures reported by other companies. Accordingly, our Core Earnings presentation does not represent a comprehensive basis of accounting. Investors, therefore, may not be able to compare our performance with that of other financial services companies based upon Core Earnings. Core Earnings results are only meant to supplement GAAP results by providing additional information regarding the operational and performance indicators that are most closely used by management, our board of directors, credit rating agencies, lenders and investors to assess performance.

16. Segment Reporting (Continued)

Segment Results and Reconciliations to GAAP

	Year Ended December 31, 2018								
						Adjustments			
(Dollars in millions)	Federal Education Loans	Consumer Lending	Business Processing	Other	Total Core Earnings	Reclassi-fications	Additions/ (Subtractions)	Total Adjustments[1]	Total GAAP
Interest income:									
Education loans	$ 3,080	$ 1,778	$ —	$ —	$ 4,858	$ 17	$ (70)	$ (53)	$4,805
Other loans	4	2	—	—	6	—	—	—	6
Cash and investments	46	13	—	38	97	—	—	—	97
Total interest income	3,130	1,793	—	38	4,961	17	(70)	(53)	4,908
Total interest expense	2,467	1,013	—	192	3,672	8	(12)	(4)	3,668
Net interest income (loss)	663	780	—	(154)	1,289	9	(58)	(49)	1,240
Less: provisions for loan losses	70	300	—	—	370	—	—	—	370
Net interest income (loss) after provisions for loan losses	593	480	—	(154)	919	9	(58)	(49)	870
Other income (loss):									
Servicing revenue	262	12	—	—	274	—	—	—	274
Asset recovery and business processing revenue	163	—	267	—	430	—	—	—	430
Other income (loss)	24	—	—	6	30	(22)	(29)	(51)	(21)
Gains on debt repurchases	—	—	—	9	9	13	(3)	10	19
Total other income (loss)	449	12	267	15	743	(9)	(32)	(41)	702
Expenses:									
Direct operating expenses	298	169	229	—	696	—	—	—	696
Unallocated shared services expenses	—	—	—	288	288	—	—	—	288
Operating expenses	298	169	229	288	984	—	—	—	984
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	47	47	47
Restructuring/other reorganization expenses	—	—	—	13	13	—	—	—	13
Total expenses	298	169	229	301	997	—	47	47	1,044
Income (loss) before income tax expense (benefit)	744	323	38	(440)	665	—	(137)	(137)	528
Income tax expense (benefit)[2]	164	71	8	(97)	146	—	(13)	(13)	133
Net income (loss)	$ 580	$ 252	$ 30	$ (343)	$ 519	$ —	$ (124)	$ (124)	$ 395

(1) Core Earnings adjustments to GAAP:

	Year Ended December 31, 2018		
(Dollars in millions)	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
Net interest income (loss) after provisions for loan losses	$ (49)	$ —	$ (49)
Total other income (loss)	(41)	—	(41)
Goodwill and acquired intangible asset impairment and amortization	—	47	47
Total Core Earnings adjustments to GAAP	$ (90)	$ (47)	(137)
Income tax expense (benefit)			(13)
Net income (loss)			$ (124)

(2) Income taxes are based on a percentage of net income before tax for the individual reportable segment.

16. Segment Reporting (Continued)

(Dollars in millions)	Federal Education Loans	Consumer Lending	Business Processing	Other	Total Core Earnings	Reclassi- fications	Additions/ (Subtractions)	Total Adjustments[1]	Total GAAP
	Year Ended December 31, 2017					Adjustments			
Interest income:									
Education loans	$ 2,679	$ 1,634	$ —	$ —	$ 4,313	$ 69	$ (55)	$ 14	$4,327
Other loans	13	—	—	—	13	—	—	—	13
Cash and investments	29	5	—	9	43	—	—	—	43
Total interest income	2,721	1,639	—	9	4,369	69	(55)	14	4,383
Total interest expense	2,022	825	—	143	2,990	(8)	(11)	(19)	2,971
Net interest income (loss)	699	814	—	(134)	1,379	77	(44)	33	1,412
Less: provisions for loan losses	44	382	—	—	426	—	—	—	426
Net interest income (loss) after provisions for loan losses	655	432	—	(134)	953	77	(44)	33	986
Other income (loss):									
Servicing revenue	280	10	—	—	290	—	—	—	290
Asset recovery and business processing revenue	263	—	212	—	475	—	—	—	475
Other income (loss)	3	—	—	16	19	(77)	89	12	31
Gains on sales of loans and investments	3	—	—	—	3	—	—	—	3
Losses on debt repurchases	—	—	—	(3)	(3)	—	—	—	(3)
Total other income (loss)	549	10	212	13	784	(77)	89	12	796
Expenses:									
Direct operating expenses	316	156	187	—	659	—	—	—	659
Unallocated shared services expenses	—	—	—	307	307	—	—	—	307
Operating expenses	316	156	187	307	966	—	—	—	966
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	23	23	23
Restructuring/other reorganization expenses	—	—	—	29	29	—	—	—	29
Total expenses	316	156	187	336	995	—	23	23	1,018
Income (loss) before income tax expense (benefit)	888	286	25	(457)	742	—	22	22	764
Income tax expense (benefit)[2]	321	103	9	58	491	—	(19)	(19)	472
Net income (loss)	$ 567	$ 183	$ 16	$ (515)	$ 251	$ —	$ 41	$ 41	$ 292

(1) Core Earnings adjustments to GAAP:

(Dollars in millions)	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
	Year Ended December 31, 2017		
Net interest income after provisions for loan losses	$ 33	$ —	$ 33
Total other income (loss)	12	—	12
Goodwill and acquired intangible asset impairment and amortization	—	23	23
Total Core Earnings adjustments to GAAP	$ 45	$ (23)	22
Income tax expense (benefit)			(19)
Net income (loss)			$ 41

(2) Income taxes are based on a percentage of net income before tax for the individual reportable segment with the impact of the DTA Remeasurement Loss included in the Other segment.

16. Segment Reporting (Continued)

	Year Ended December 31, 2016								
						Adjustments			
(Dollars in millions)	Federal Education Loans	Consumer Lending	Business Processing	Other	Total Core Earnings	Reclassi-fications	Additions/ (Subtractions)	Total Adjustments(1)	Total GAAP
Interest income:									
Education loans	$ 2,395	$ 1,587	$ —	$ —	$ 3,982	$ 247	$ (114)	$ 133	$4,115
Other loans	9	—	—	—	9	—	—	—	9
Cash and investments	16	2	—	4	22	—	—	—	22
Total interest income	2,420	1,589	—	4	4,013	247	(114)	133	4,146
Total interest expense	1,597	704	—	109	2,410	31	—	31	2,441
Net interest income (loss)	823	885	—	(105)	1,603	216	(114)	102	1,705
Less: provisions for loan losses	46	383	—	—	429	—	—	—	429
Net interest income (loss) after provisions for loan losses	777	502	—	(105)	1,174	216	(114)	102	1,276
Other income (loss):									
Servicing revenue	289	15	—	—	304	—	—	—	304
Asset recovery and business processing revenue	216	—	174	—	390	—	—	—	390
Other income (loss)	—	—	—	14	14	(216)	326	110	124
Gains on debt repurchases	—	—	—	1	1	—	—	—	1
Total other income (loss)	505	15	174	15	709	(216)	326	110	819
Expenses:									
Direct operating expenses	366	149	149	—	664	—	—	—	664
Unallocated shared services expenses	—	—	—	287	287	—	—	—	287
Operating expenses	366	149	149	287	951	—	—	—	951
Goodwill and acquired intangible asset impairment and amortization	—	—	—	—	—	—	36	36	36
Restructuring/other reorganization expenses	—	—	—	—	—	—	—	—	—
Total expenses	366	149	149	287	951	—	36	36	987
Income (loss) before income tax expense (benefit)	916	368	25	(377)	932	—	176	176	1,108
Income tax expense (benefit)(2)	338	137	9	(139)	345	—	82	82	427
Net income (loss)	$ 578	$ 231	$ 16	$ (238)	$ 587	$ —	$ 94	$ 94	$ 681

(1) Core Earnings adjustments to GAAP:

	Year Ended December 31, 2016		
(Dollars in millions)	Net Impact of Derivative Accounting	Net Impact of Acquired Intangibles	Total
Net interest income after provisions for loan losses	$ 102	$ —	$ 102
Total other income (loss)	110	—	110
Goodwill and acquired intangible asset impairment and amortization	—	36	36
Total Core Earnings adjustments to GAAP	$ 212	$ (36)	176
Income tax expense (benefit)			82
Net income (loss)			$ 94

(2) Income taxes are based on a percentage of net income before tax for the individual reportable segment.

16. Segment Reporting (Continued)

Summary of Core Earnings Adjustments to GAAP

(Dollars in millions)	Years Ended December 31, 2018	2017	2016
Core Earnings net income	$ 519	$ 251	$ 587
Core Earnings adjustments to GAAP:			
Net impact of derivative accounting[(1)]	(90)	45	212
Net impact of goodwill and acquired intangible assets[(2)]	(47)	(23)	(36)
Net income tax effect[(3)]	13	19	(82)
Total Core Earnings adjustments to GAAP	(124)	41	94
GAAP net income	$ 395	$ 292	$ 681

(1) **Derivative accounting:** Core Earnings exclude periodic gains and losses that are caused by the mark-to-market valuations on derivatives that do not qualify for hedge accounting treatment under GAAP as well as the periodic mark-to-market gains and losses that are a result of ineffectiveness recognized related to effective hedges under GAAP. These gains and losses occur in our Federal Education Loans, Consumer Lending and Other reportable segments. Under GAAP, for our derivatives that are held to maturity, the mark-to-market gain or loss over the life of the contract will equal $0 except for Floor Income Contracts where the mark-to-market gain will equal the amount for which we sold the contract. In our Core Earnings presentation, we recognize the economic effect of these hedges, which generally results in any net settlement cash paid or received being recognized ratably as an interest expense or revenue over the hedged item's life.

(2) **Goodwill and acquired intangible assets:** Our Core Earnings exclude goodwill and intangible asset impairment and amortization of acquired intangible assets.

(3) **Net tax effect:** Such tax effect is based upon our Core Earnings effective tax rate for the year.

17. Quarterly Financial Information (unaudited)

(Dollars in millions, except per share data)	2018 First Quarter	2018 Second Quarter	2018 Third Quarter	2018 Fourth Quarter
Net interest income	$ 329	$ 298	$ 306	$ 307
Less: provisions for loan losses	87	112	85	85
Net interest income after provisions for loan losses	242	186	221	222
Other income	163	176	203	196
Gains (losses) on derivative and hedging activities, net	48	(40)	2	(48)
Operating expenses	275	201	255	252
Goodwill and acquired intangible asset impairment and amortization expense	9	6	23	8
Restructuring/other reorganization expenses	7	2	1	4
Income tax expense	36	30	33	34
Net income	$ 126	$ 83	$ 114	$ 72
Basic earnings per common share	$ .48	$ .31	$ .44	$ .28
Diluted earnings per common share	$ .47	$ .31	$ .43	$ .28

(Dollars in millions, except per share data)	2017 First Quarter	2017 Second Quarter	2017 Third Quarter	2017 Fourth Quarter
Net interest income	$ 340	$ 351	$ 355	$ 366
Less: provisions for loan losses	107	105	105	109
Net interest income after provisions for loan losses	233	246	250	257
Other income	168	187	238	181
Gains (losses) on derivative and hedging activities, net	(16)	(25)	25	38
Operating expenses	238	230	238	260
Goodwill and acquired intangible asset impairment and amortization expense	6	6	6	5
Restructuring/other reorganization expenses	—	—	—	29
Income tax expense	53	60	93	266
Net income (loss)	$ 88	$ 112	$ 176	$ (84)
Basic earnings (loss) per common share	$ .31	$ .40	$ .65	$ (.32)
Diluted earnings (loss) per common share	$ .30	$ .39	$ .64	$ (.32)

SOC II TYPE II AUDIT

SOC II Type II Audit follows.

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duncan solutions

BAKER TILLY

Candor. Insight. Results.

Duncan Solutions, Inc. DRIVE System

Report on Management's Description of its System and the Suitability of the Design and Operating Effectiveness of Controls

SOC 2® Type 2
May 15, 2018, to August 15, 2018

Table of Contents

BAKER TILLY

1. Independent Service Auditor's Report

To the Management of Duncan Solutions, Inc.:

Scope

We have examined Duncan Solutions, Inc.'s (Duncan) accompanying description of its DRIVE System titled "Duncan Solutions, Inc.'s Description of its DRIVE System" throughout the period May 15, 2018, to August 15, 2018, (description) based on the criteria for a description of a service organization's system in DC section 200A, *2015 Description Criteria for a Description of a Service Organization's System in a SOC® 2 Report* (AICPA, *Description Criteria)*, (description criteria) and the suitability of the design and operating effectiveness of controls stated in the description throughout the period May 15, 2018, to August 15, 2018, to meet the criteria for the security principle (applicable trust services criteria) set forth in TSP section 100A, *Trust Services Principles and Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy* (2016) (AICPA, *Trust Services Principles and Criteria*).

The information included in Section 5, "Other Information Provided by Duncan Solutions, Inc." is presented by management of Duncan to provide additional information and is not part of Duncan's description of its DRIVE System made available to user entities during the period May 15, 2018, to August 15, 2018. Information about Duncan's management's responses to the identified findings has not been subjected to the procedures applied in the examination of the description and of the suitability of the design and operating effectiveness of the controls to meet the applicable trust services criteria, and accordingly, we express no opinion on it.

Duncan uses a subservice organization for data hosting. The description indicates that complementary subservice organization controls that are suitably designed and operating effectively are necessary, along with controls at Duncan, to meet the applicable trust services criteria. The description presents Duncan's controls, the applicable trust services criteria, and the types of complementary subservice organization controls assumed in the design of Duncan's controls. The description does not disclose the actual controls at the subservice organization. Our examination did not include the services provided by the subservice organization, and we have not evaluated the suitability of the design or operating effectiveness of such complementary subservice organization controls.

Service Organization's Responsibilities

Duncan has provided the accompanying assertion titled "Assertion of Duncan Solutions, Inc." (assertion) about the description and the suitability of design and operating effectiveness of controls stated therein. Duncan is responsible for preparing the description and assertion, including the completeness, accuracy, and method of presentation of the description and assertion; providing the services covered by the description; selecting the applicable trust services criteria and stating the related controls in the description; identifying the risks that would prevent the applicable trust services criteria from being met; designing, implementing, and documenting controls that are suitably designed and operating effectively to meet the applicable trust services criteria stated in the description.

Service Auditor's Responsibilities

Our responsibility is to express an opinion on the description and on the suitability of design and operating effectiveness of controls stated in the description based on our examination. Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform our examination to obtain reasonable assurance about whether, in all material respects, the description is presented in accordance with the description criteria and the controls stated therein were suitably designed and operated effectively to provide reasonable assurance that the applicable trust services criteria were met. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

An examination of the description of a service organization's system and the suitability of the design and operating effectiveness of controls involves the following:

> Obtaining an understanding of the system

> Assessing the risks that the description is not presented in accordance with the description criteria and that controls were not suitably designed or did not operate effectively

> Performing procedures to obtain evidence about whether the description is presented in accordance with the description criteria

> Performing procedures to obtain evidence about whether controls stated in the description were suitably designed to provide reasonable assurance that applicable trust services criteria were met

> Testing the operating effectiveness of controls stated in the description to provide reasonable assurance that the applicable trust services criteria were met

> Evaluating the overall presentation of the description

Our examination also included performing such other procedures as we considered necessary in the circumstances.

Inherent Limitations

The description is prepared to meet the common needs of a broad range of report users and may not, therefore, include every aspect of the system that individual users may consider important to meet their informational needs.

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumstances of controls.

Because of their nature, controls may not always operate effectively to provide reasonable assurance that the applicable trust services criteria are met. Also, the projection to the future of any conclusions about the suitability of the design and operating effectiveness of controls to meet the applicable trust services criteria is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

Description of Tests of Controls

The specific controls we tested and the nature, timing, and results of our tests are listed in Section 4 of this report.

Opinion

In our opinion, in all material respects:

a. The description presents the DRIVE System that was designed and implemented throughout the period May 15, 2018, to August 15, 2018, in accordance with the description criteria.

b. The controls stated in the description were suitably designed throughout the period May 15, 2018, to August 15, 2018, to provide reasonable assurance that the applicable trust services criteria would be met if the controls operated effectively throughout that period, and if the subservice organization applied the complementary controls assumed in the design of Duncan's controls throughout that period.

c. The controls stated in the description operated effectively throughout the period May 15, 2018, to August 15, 2018, to provide reasonable assurance that the applicable trust services criteria were met, if complementary subservice organization controls assumed in the design of Duncan's controls operated effectively throughout that period.

Restricted Use

This report, including the description of tests of controls and results thereof in Section 4, is intended solely for the information and use of Duncan and its affiliates; user entities of Duncan's DRIVE System during some or all of the period May 15, 2018, to August 15, 2018, business partners of Duncan subject to risks arising from interactions with the DRIVE System, practitioners providing services to such user entities, prospective user entities and business partners and regulators who have sufficient knowledge and understanding of the following:

> The nature of the service provided by the service organization
> How the service organization's systems interact with user entities, business partners, subservice organizations, and other parties
> Internal control and its limitations
> Complementary subservice organization controls and how these controls interact with the controls at the service organization to meet the applicable trust services criteria
> User entity responsibilities and how they may affect the user entity's ability to effectively use the service organization's services
> The applicable trust services criteria
> The risks that may threaten the achievement of the applicable trust services criteria and how controls address those risks

This report is not intended to be and should not be, used by anyone other than these specified parties.

Baker Tilly Virchow Krause, LLP

October 15, 2018
Milwaukee, Wisconsin

2. Assertion of Duncan Solutions, Inc.

We have prepared the accompanying description of Duncan Solutions, Inc. (Duncan) DRIVE System, titled "Duncan Solutions, Inc. Description of its DRIVE System" throughout the period May 15, 2018, to August 15, 2018, (description) based on the criteria for a description of a service organization's system in DC section 200A, *2015 Description Criteria for a Description of a Service Organization's System in a SOC® 2 Report* (AICPA, *Description Criteria)* (description criteria). The description is intended to provide report users with information about the DRIVE System that may be useful when assessing the risks arising from interactions with Duncan's DRIVE System, particularly information about the suitability of design and operating effectiveness of Duncan's controls to meet the criteria related to the security principle (applicable trust services criteria) set forth in TSP section 100A, *Trust Services Principles and Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (2016)* (AICPA, *Trust Services Principles and Criteria)*.

Duncan uses a subservice organization for data hosting. The description indicates that complementary subservice organization controls that are suitably designed and operating effectively are necessary, along with controls at Duncan, to meet the applicable trust services criteria. The description presents Duncan's controls, the applicable trust services criteria, and the types of complementary subservice organization controls assumed in the design of Duncan's controls. The description does not disclose the actual controls at the subservice organization.

We confirm, to the best of our knowledge and belief, that:

a. The description fairly presents Duncan's DRIVE System that was designed and implemented throughout the period May 15, 2018, to August 15, 2018, in accordance with the description criteria.

b. The controls stated in the description were suitably designed throughout the period May 15, 2018, to August 15, 2018, to provide reasonable assurance that the applicable trust services criteria would be met if the controls operated effectively throughout the period, and if the subservice organization applied the complementary controls assumed in the design of Duncan's controls throughout that period.

c. The controls stated in the description operated effectively throughout the period May 15, 2018, to August 15, 2018, to provide reasonable assurance that the applicable trust services criteria were met, if the complementary subservice organization controls assumed in the design of Duncan's controls operated effectively throughout that period.

3. Duncan Solutions, Inc.'s Description of its DRIVE System

Overview

Duncan Solutions, Inc. (Duncan or the Company), is the largest solution provider to municipal on-street parking management programs in the United States. In North America, Duncan currently serves more than 200 public and private sector clients providing transportation-related products and services, notably solutions for parking management, tolling solutions, Department of Motor Vehicles (DMV) data management, and collections services.

This report focuses on the operations at Duncan's headquarters in Milwaukee, Wisconsin and DMV data management and registration retrieval solutions. Locating the registered owner of a vehicle is essential to collecting delinquent violations. Without the proper name and address, ticket revenue may be lost forever and scofflaws have an incentive to violate again and again. However, navigating the DMV maze can be confusing, with a variety of state-specific rules, plate type issues, and contractual requirements that can inhibit data retrieval or result in cases of mistaken identity. Offered to municipalities, universities, tollways and their qualified agents, DRIVE provides a method to submit license plates for registration retrieval and download to your computer.

This service is offered in compliance with the Federal Drivers Privacy Protection Act and the laws of individual states governing access to motor vehicle records. DRIVE streamlines the registration retrieval process by automating DMV interface best practices.

Duncan is also a wholly-owned subsidiary of Navient Corporation (Navient) (Nasdaq: NAVI), and adheres to numerous Navient policies and procedures. Navient (through its wholly-owned subsidiary Navient Solutions, LLC) provides numerous administrative and support services to Duncan, including information technology (IT), compliance, and security related services. Throughout this document, the terms Navient and Duncan (when referencing administrative/support functions, personnel, policies, etc.) are used interchangeably to reflect this parent-subsidiary relationship.

DC section 200A, *2015 Description Criteria for a Description of a Service Organization in a SOC 2® Report* was used for writing this system description.

Infrastructure

The IT environment is centrally managed by staff at Duncan's offices located in Milwaukee, Wisconsin. Duncan leverages a shared services approach for IT system administration where system administrators have the responsibility for supporting the entire IT environment including networking, storage, servers, and databases. Business critical applications are managed by application support administrators.

The DRIVE architecture consists of the following components:

- **Web Server** - used to run DRIVE reports
- **Database Server** - runs the application and stores the DRIVE SQL databases
- **SFTP Server(s)** - allows secure file transfer protocol (SFTP).
- **NAS Server** - Archive storage

Security policies and standards are in place to address network access, security domains, and perimeter protections, including firewalls, outbound filtering and security monitoring. Firewall rule set and routing controls are in place and updated as needs warrant. The rule set is based on the premise that traffic that is not expressly allowed is denied. A firewall is in place at each internet connection and between any demilitarized zone (DMZ) and the internal network zone.

Software

Duncan utilizes the proprietary DRIVE application to support its DMV registered owner acquisition services business. The DRIVE application is responsible for securely managing all client vehicle registration requests, determining the "best source" for all requests depending on the client's eligibility to request information from a given data sources, securely transmitting and receiving information with the various data sources, validating the registered owner information received from the data sources and securely communicating the inquiry results back to the appropriate clients. The DRIVE application is a non-public .Net service bus application that uses Microsoft SQL server as its database management system.

People

The management structure has been designed to ensure proper resource allocation, accountability, and transparency, with minimum overhead and maximum focus on client and customer responsiveness. Key roles are designed for segregation of duties to enable independent oversight for key compliance functions and fiscal controls. Adherence by all employees to the main tenants of Duncan – exemplary customer service, the highest quality standards and innovative delivery solutions - are continuously reinforced. Monitoring metrics on quality and service by all employees, with appropriate oversight by Duncan's Chief Executive Officer (CEO) and Executive Team, ensures that standards are not just met, but exceeded where possible.

Staff with authorized access to the DRIVE application and its data consists of selected members of Duncan IT and the Duncan DMV Relationship Line of Business. Duncan staff access to the DRIVE application and database is severely restricted to a few authorized individuals who have undergone rigorous background checks due to the sensitive nature of data under its management. All aspects of the DRIVE application are maintained by Duncan staff only. Refer to below organizational chart.

Duncan operates within the Navient corporate structure, which includes the following:

> **Human Resources (HR)** – Led by the Chief Human Resources Officer, this team is responsible for the management of the HR function, which includes technology and operations, compensation, employee relations, benefits, talent acquisition, talent management, and community relations.

> **Finance** – Led by the Chief Financial Officer, the Finance Team is responsible for services such as, accounting and tax, procurement, financial planning, financial systems, treasury, and investor relations.

> **IT** – Led by Navient's Chief Information Officer (CIO), the IT division is subdivided into Application Development, Architecture, Technology Infrastructure and Operations and Security. Within these subdivisions, key IT functions, including database management, application development, and computer operations are appropriately segregated.

> **Internal Audit** – Led by Navient's Chief Audit Officer (CAO), the Internal Audit function provides independent, objective assurance to the Company and its Board of Directors on the effectiveness of management's internal controls and governance processes to include policies, procedures, processes and risk management activities.

> **Risk and Compliance** – Led by the Chief Risk and Compliance Officer, this team provides direction and expertise on key compliance and control processes and regulatory requirements with enterprise-wide applicability, such as Privacy, Policies and Procedures, Code of Business Conduct, Internal Control Excellence, Law and Regulatory Change, Transactional Testing and Monitoring, Compliance Risk Assessment and Compliance Training.

> **Legal** – Led by the Chief Legal Officer and Secretary, the Legal Team is responsible for shaping Navient's approach to legal and regulatory affairs, advising senior management and Board of Directors, and leading Navient's Office of the General Counsel.

Policies and Procedures

Duncan has established policies and procedures to ensure the security of information; establish and maintain a safe and secure environment for Duncan employees, customers, and visitors; and document other critical system, personnel, and business processes. Policies and procedures include, but are not limited to: personnel security, information security, physical security, security incident and response, access control, change management and vendor management. Policies and procedures are managed within a central document repository, and reviewed and approved at defined frequencies. For certain processes, Duncan may leverage Navient enterprise-wide policies and/or procedures.

Data

In performing registration retrieval service, Duncan receives and processes a large amount of confidential data. Duncan classifies and protects data according to the level of confidentiality, sensitivity or importance to the corporation. Defined data classifications include the following:

> **Internal** – General business information of a proprietary nature regarding the organization that is generally intended only for internal distribution. Examples include: Contract Information, Internal Policies, Internal Procedures, and Audit Reports.

> **Private** - This information is of a personal nature involving either employees, or consumers or customer data often protected by laws and regulations and is essential for the Company to achieve its mission. Examples include: Vehicle registered owner identification, and vehicle owner address.

> **Confidential** - This information or data is highly sensitive or provides a significant competitive advantage. Examples include: Proprietary Corporate Information; IT systems information or network diagrams; Application Code; and Disaster Recovery, Business Resumption and Business Continuity Plans.

Client Onboarding Procedures (Subscriber Agreements) exist to provide instructions on input/output of data required for processing registration retrieval services and obtaining registered owner information. Confirmation emails are sent to clients to notify when files and data have been received by Duncan and when files are returned to clients.

Relevant Aspects of the Control Environment, Risk Assessment Process, Information and Communication Systems, and Monitoring of Controls

Control Environment

The control environment is the foundation for all other areas of internal control. As such, the control environment of Duncan sets the tone for the organization and influences control consciousness and discipline of employees. Management of Duncan emphasizes the importance of controls and ethical behavior throughout the organization.

Duncan's internal controls environment is designed to ensure adequate internal controls and compliance with legislative and regulatory requirements. Duncan's internal control environment reflects the overall attitude, awareness and actions of management, and others concerning the importance of controls and the emphasis given to controls in the Company's policies, procedures, methods, and organizational structure.

Duncan management has the primary responsibility to develop, maintain and document adequate internal controls. These controls are designed and built into all critical applications to provide reasonable assurance as to the integrity of the data processed and applicable compliance to relevant regulatory requirements.

Duncan's CEO is actively involved in the oversight of the operations as well as pursuit of new business opportunities. Duncan's Executive Team, consisting of the CEO, the Chief Operating Officer, the Chief Financial Officer, the Chief Technology Officer (CTO), and the General Counsel actively monitor performance of key financial and operational metrics on a monthly basis. The Executive Team meets monthly to facilitate communication and coordination and to ensure that all strategic areas of the Company are in alignment and performing at acceptable levels. Members of the Executive Team meet regularly with their team members to cascade strategic direction and operational objectives throughout the Company, ensuring implementation of desired goals and action.

Duncan's Executive Team and CEO have the ultimate responsibility for all activities within the Company, including the internal control system. This also includes assignment of authority and responsibility for operating activities, and establishment of reporting relationships and authorization protocols. When assigning authority and responsibility, management considers the nature of employee positions as well as ensuring that effective segregations of duties are maintained.

Management has given employees – especially managers and supervisors – the authority to make decisions based on their knowledge, skill and assigned responsibilities. This has empowered the employees to correct problems and suggest process and management improvements. The employees understand this responsibility and involve management in their decision-making process through both formal and informal communications. Such communications include: documented procedures for the performance of designated functions; daily performance and status reporting; daily, weekly, and monthly quality sampling and reporting; monthly departmental reviews of operations and financial performance; change control and incident reporting processes; compliance management program reviews; annual and ongoing IT security and electronic payment management audits; and an annual financial audit program.

Personnel policies and practices are established and are continually monitored by management and the HR department. Candidates must clear background verification, reference checks, drug and alcohol screening, and complete an introductory period where they are trained and reviewed. Performance standards are maintained for all applicable positions, and performance evaluations are conducted annually. Employees receive, at a minimum, an annual performance evaluation. During the performance reviews, specific goals are established with timelines for achieving each goal. The achievement of these goals is used in determining promotions, position enhancement and pay increases.

To help ensure integrity and controls within the DRIVE system, Duncan has organized its personnel with defined responsibilities. Written documentation of policies and procedures as well as formal training programs (including annual security awareness training) exists to facilitate consistent performance. Officers and employees of Duncan are expected to exercise the utmost integrity and good faith in the performance of their corporate duties.

Duncan has a responsibility to conduct its business in strict compliance with all applicable laws and regulations, and it is the Company's policy to do so. Duncan expects employees to act in accordance with the highest standards of business ethics both on and off Company premises, to avoid any appearance of impropriety, and to observe all applicable laws and regulations while conducting business on the Company's behalf.

Duncan takes pride in the Code of Business Conduct (COBC), and as such every employee is required to review and acknowledge the policies contained therein, as well as attend COBC training. The COBC covers many ethical subjects that can be summarized as: business relationships, personal relationships, confidentiality and conflicts of interest. In addition to following the COBC, all employees are trained on recognizing and reporting potential violations.

Risk Assessment Process

The monitoring, assessment and oversight of risk are shared responsibilities throughout Duncan. Data security is mission critical to Duncan. Regulatory requirements mandate that Duncan continuously analyze potential risks and implement solutions to ensure compliance. Duncan maintains operational processes designed to identify and manage risks. This process requires team leaders to identify significant risks inherent in all aspects of operations and to implement appropriate measures to monitor and manage these risks. These include various aspects of financial and technological risks, including risks introduced by changes in the nature of services provided and processing when applicable.

On an annual basis and after any significant infrastructure or application upgrade or modification, Duncan along with the assistance of Navient IT representatives, performs external and internal penetration testing. The penetration tests include network-layer penetration tests and application-layer penetration tests. The tests are performed by a qualified internal resource or qualified external third-party. Exploitable vulnerabilities found during penetration testing are corrected and testing is repeated to verify the corrections.

Vulnerability scans against all servers are run at least monthly. Network Security, System Administration, and Application Development teams assess and research known vulnerabilities and their threat to the Duncan environment to determine patch applicability and priority. Vulnerability remediation follows a risk-based approach as defined in the Vulnerability Management Procedures. On a quarterly basis, the same representatives conduct vulnerability scanning of the DRIVE environment to determine system and infrastructure vulnerabilities. Vulnerabilities are remediated through the monthly patching process which are managed through System Center Configuration Management where patches are reviewed and tested prior to implementing.

Duncan conducts an annual risk assessment of the information systems that process, store, or transmit customer information. The risk assessment includes identifying reasonably foreseeable internal and external risks/threats to the security, and assessing the likelihood and magnitude of harm from the unauthorized disclosure, misuse, alteration, destruction, or other compromise of such information.

Information and Communication Systems

Duncan provides the information systems that are used for processing registration retrieval services and obtaining registered owner information.

Duncan communicates information on multiple levels both internally and externally. Information transmission must meet different corporate and regulatory requirements, depending upon the nature and scope of the information.

Employee Communications

Duncan utilizes the "shared network drive" as its hub for communication of information. Microsoft SharePoint is used for routine corporate communications, including quarterly presentation materials, Company announcements, the Employee Handbook, and policies, procedures and processes. Duncan has a variety of communication channels to ensure all employees understand corporate initiatives, processes and controls, and to ensure that significant news and events are communicated in a timely manner.

Customer Communications

Duncan has implemented various methods of communication to ensure customers understand Duncan's role and responsibilities in providing processing of registration retrieval services and obtain registered owner information.

External communications are complex, and subject to stringent controls. Customer communications, vendor data communications, legislative information and internet applications all require careful attention and monitoring to ensure compliance with internal controls and regulatory requirements. Duncan communicates with their customers on a routine basis. A Master Services Agreement (MSA) or Subscriber Agreement is formalized and signed before services are provided to customers. These contracts outline information security requirements for both the parties engaged.

Monitoring of Controls

Duncan employs a multi-tiered approach to ensure quality customer service, ongoing control verification, business performance and compliance with federal and state statutes and regulations. Business areas and support areas conduct monitoring activities designed to ensure internal controls are properly designed and operating effectively, regulatory compliance obligations are being met, and Duncan is operating within expected service levels.

Vendor Management

Management has established a sourcing framework and Vendor Risk Management Program to ensure appropriate due diligence is exercised prior to entering into vendor relationships. The program also provides oversight after the relationship has been established, and periodically reassess the vendor against the established criteria. The sourcing framework provides guidance for procurement efforts, including sourcing needs assessment, identification of potential vendors, initial due diligence and vendor selection, contract development, and ongoing monitoring and due diligence of vendor relationships. Vendor risk assessment is a structured process that classifies vendors based on risk potential to Duncan, provides a more detailed analysis of vendors identified with higher risk potential, and helps ensure appropriate monitoring and mitigation of identified risks.

Ongoing relationship management, vendor performance and attainment of any agreed service levels are monitored by a Duncan business owner, an assigned representative within the primary line of business utilizing the vendor services. The operational monitoring and oversight executed by the business owner are at a level of detail commensurate with the risk of the business relationship and criticality of the vendor.

Duncan utilizes one subservice organization to provide data hosting services. Vendor management procedures are in place to perform reviews of this critical vendor. On an annual basis, the Director of Data Center Services reviews the due diligence report from the subservice organization and discuss any issues noted with the CTO.

Information Technology General Controls

Logical Access

Access to system components and software within the sensitive data environment is controlled and restricted to those with a business need for that access. This is achieved through the use of active access control systems, strong controls on user and password management, and restricting physical access to critical or sensitive components and software to individuals with least privilege required access to perform job responsibilities.

It is critical to assign a unique identification to each person with access to critical systems or software. This ensures that each individual is uniquely accountable for his or her actions. When such accountability is in place, actions taken on critical data and systems are performed by, and can be traced to, known and authorized users. Internal users must authenticate through Active Directory (AD) to access Duncan applications. Duncan AD passwords follow the Password Policy.

New user requests are generated within the SharePoint site. Requests are filled out, detailing new user title and access requirements. Requests are sent to IT where access is provisioned. Additional requests for DRIVE access require a separate form for approval by the business owner.

On a daily basis, the IT Shared Services Team receives a report from HR listing terminations, job changes, and promotions. Each entry is reviewed to determine whether the user had access to relevant systems within two business days. System access accounts of terminated employees must be immediately deactivated or removed. All inactive or disabled user accounts must be removed at least every 60 days.

Access rights are reviewed to confirm users have access to the appropriate roles/functions within the system. Based upon the results of the review(s), unnecessary accounts or rights are disabled or removed. System application IDs are reviewed on an annual basis and approved by the application ID owner.

Security credentials for connections to third-party data sources are secured by Duncan security administrators.

Physical Access

The Duncan Corporate Physical Security Policy facilitates the implementation of the physical and environmental protection policy and associated physical and environmental protection controls. This document is made available to the appropriate personnel, and is reviewed, updated, and approved annually. Items addressed within the physical security policy and procedures include, but are not limited to, building security information, access security, locks and key systems, emergency procedures, and threat reporting.

Physical security controls exist for each computer room and any other physical areas that contain systems in the DRIVE environment. Each door, entrance and exit that provides exterior access to a company building or office space from the outside or from shared or common tenant spaces is physically secured, controlled and monitored, via devices such as badge readers.

Procedures and controls are in place to verify individual access authorizations before granting access to the facility. Each Duncan facility employs an access control system that grants facility access based on credentials within an identification badge. Badge access is modified upon notification of transfer.

Duncan has developed procedures to help easily distinguish between employees and visitors. In accordance with the Duncan Corporate Physical Security Policy, all guests and visitors entering a company facility sign in at the building main reception area so that a record of the visit is established. Procedures are in place to issue, manage, and track visitor badges for guests. The Visitor Log contains the visitor's name and organization represented, signature, form of identification, date of access, time of entry and departure, purpose of visit and the onsite personnel authorizing physical access/person visited/escort. Upon signing in, all non-employee visitors are provided with an identification badge that must be worn and displayed at all times while on the premises. The visitor badge is a visual identifier only and does not provide access to any exterior or interior entrance door. The visitor badge is returned at the end of the day or when departing the facility.

On a daily basis, the IT Shared Services Team receives a report from HR listing terminations, job changes, and promotions. Each entry is reviewed to determine whether the user had access to the data center. Badge access is revoked within two days of termination. Access to the production data center is reviewed annually. Unauthorized access is removed.

Change Management

Duncan's objective of Change Management is to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes to controlled IT infrastructure, in order to minimize the number and impact of any related incidents upon service. Processes and controls are integrated throughout the system development lifecycle (SDLC) change management processes that identify tasks, security checkpoints, approvals, and ownership. Emergency change procedures are documented within the Change Management Standard.

Change management is the process that approves and schedules the change in order to ensure the correct level of notification and minimal user impact. Track-It is used to create approve and close change requests. Key steps for change management include:

- Document change requirements that include the detail of the change requested, the reason for the change, impact, estimated production down time, roll out steps, test environment testing validation, production environment test validation, business impact, risk level and roll back plan
- Approval from the assigned approvers
- Hold post mortem meetings for unsuccessful changes to determine the root cause of the failure

Application developers must provide technical specifications for application changes to an appropriate person for review and approval based on the project participation matrix. Each change requires minimum of 3 people to approve or deny the change. The team must review all change requests and approve or deny each request based on completeness, readiness, business impact, business need and any other conflicts.

Computer Operations

The primary purpose of the Information Security Policy is to establish rules to ensure the protection of confidential and/or sensitive information stored or transmitted electronically and to ensure protection of Duncan's IT resources. The policy assigns responsibility and provides guidelines to protect Duncan's systems and data against misuse and/or loss.

It is the responsibility of Duncan for the management control of network security. Management control of network security includes the authority to set and enforce policy governing the operation of circuits and network equipment used to transmit data.

In order to protect confidential and/or sensitive information, it is critical to design and maintain a secure network infrastructure where this data may be stored, processed, or transmitted. Data transmissions managed by Duncan are secured.

Logging mechanisms and the ability to track user activities are critical in preventing, detecting, or minimizing the impact of a data compromise. The presence of logs allows thorough tracking, alerting, and analysis when something does go wrong. An event log monitoring system is in place to alert for unusual or suspicious activity within the Duncan environment.

DRIVE data must be unreadable anywhere it is transmitted or stored, including data on portable media, in logs, and data received over the internet. The following approaches are acceptable:

> Strong cryptography, such as Triple-DES 168-bit or AES 256-bit with associated key management processes and procedures.
> Minimum Triple-DES 168-bit encryption.

Complementary Subservice Organization Controls

Duncan's controls related to the DRIVE Application cover only a portion of overall internal control for each user entity of Duncan. It is not feasible for the controls related to processing transactions to be achieved solely by Duncan. Therefore, each user entities' internal control should be evaluated in conjunction with Duncan's controls and the related tests and results described in Section 4 of the report, taking into account the related complementary subservice organization controls expected to be implemented at the subservice organizations as described below.

Complementary Subservice Organization Controls	Duncan related criteria
Physical storage housing the system and restricted access to the facility.	CC5.5

User Entity Responsibilities

Each user entity must evaluate its own system of internal controls for effective risk management and compliance. The internal controls described in this report occur at and are managed by Duncan and only cover a portion of a comprehensive internal control structure. Each user entity must address the various aspects of internal control that may be unique to its particular organization. This section highlights those portions of the internal control structure that clients have the responsibility to develop and maintain.

> Providing written notice to Duncan if any discrepancies are identified.

> Ensuring adequate controls are in place to verify that data sent to Duncan is complete, accurate and secure.

> Establishing controls to ensure that only authorized employees and contractors have access to send and receive data to and from Duncan.

4. Description of Applicable Trust Services Criteria, Controls, Tests and Results of Tests

This section identifies the applicable trust services criteria along with the related controls specified by Duncan for the following principle:

- ***Security:*** The system is protected against unauthorized access, use or modification.

In addition to the controls specified by Duncan to meet the applicable trust services criteria, this section also contains tests pertaining to effectiveness that were performed by Baker Tilly for the controls specified by Duncan in order to determine whether Duncan's controls were designated and operating with sufficient effectiveness to meet the applicable trust services criteria. Baker Tilly's testing procedures were limited to the controls identified within this section of the report, and did not extend to controls described in Section 3 but not identified within this Section 4. Baker Tilly determined the nature, timing and extent of the testing performed.

Duncan's internal control presents the collective effort of various factors on establishing or enhancing the effectiveness of the controls specified by Duncan. In planning the nature, timing, and extent of our testing of the controls to achieve the applicable trust services criteria, we considered aspects of Duncan's control environment, risk assessment process, monitoring activities, and information and communications.

The following table clarifies certain terms used in this section to describe the nature of the tests performed.

Test	Description
Inquiry	Inquiry of appropriate personnel and corroboration with management
Observation	Observation of the application, performance, or existence of the control
Inspection	Inspection of documents and reports indicating performance of the control

In addition, as required by paragraph .35 of AT-C Section 205, *Examination Engagements* (AICPA, *Professional Standards*) when using information produced (or provided) by the service organization, we evaluated whether the information was sufficiently reliable for our purposes by obtaining evidence about the accuracy and completeness of such information and evaluating whether the information was sufficiently precise and detailed for our purposes.

CC1.0 Common Criteria Related to Organization and Management

Organization and Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC1.1 The entity has defined organizational structures, reporting lines, authorities, and responsibilities for the design, development, implementation, operation, maintenance, and monitoring of the system enabling it to meet its commitments and system requirements as they relate to security.	**EL-1:** The organizational structure, reporting lines, authorities, and responsibilities have been documented and maintained.	Inspected the following organization charts to determine whether reporting lines and responsibilities had been defined and were periodically reviewed: > Executive management > Information technology > Operations	No exceptions noted.
	EL-2: Formal job descriptions have been documented and maintained to outline employee roles and responsibilities.	For a sample of employees, inspected job description documentation to determine whether job descriptions had been documented, maintained, and whether roles and responsibilities were outlined within.	No exceptions noted.
CC1.2 Responsibility and accountability for designing, developing, implementing, operating, maintaining, monitoring, and approving the entity's system controls and other risk mitigation strategies are assigned to individuals within the entity with authority to ensure policies and other system requirements are effectively promulgated and implemented to meet the entity's commitments and system requirements as they relate to security.	**EL-1:** The organizational structure, reporting lines, authorities, and responsibilities have been documented and maintained.	*Refer to tests performed at **CC1.1***	No exceptions noted.
	EL-2: Formal job descriptions have been documented and maintained to outline employee roles and responsibilities.	*Refer to tests performed at **CC1.1***	No exceptions noted.
	EL-6: Employees are required to complete Security Awareness Training at the time of hire and on an annual basis. Corporate Compliance monitors the completion status of training and notifies employees and management when trainings are past due.	For a sample of employees, inspected training reports to determine whether Security Awareness Training was completed. Inspected the DRIVE user access listing to determine that no new hires were provisioned access during the examination period.	**Annual Training:** No exceptions noted. **New Hire Training:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

Organization and Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC1.2 *(continued)* Responsibility and accountability for designing, developing, implementing, operating, maintaining, monitoring, and approving the entity's system controls and other risk mitigation strategies are assigned to individuals within the entity with authority to ensure policies and other system requirements are effectively promulgated and implemented to meet the entity's commitments and system requirements as they relate to security.	**EL-8:** The following policies and procedures have been developed, are reviewed annually and are available to authorized employees through an internal portal: > Termination Policy > Change Management > Incident Response > Information Security > Physical Security Policy	Inspected system components and policy documentation to determine whether policies were developed, reviewed annually and were available to authorized employees through an internal portal.	No exceptions noted.
	EL-10: Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	Inspected policy documentation to determine whether the Information Security Policy included security configuration and management of network systems, considered the relevant risks to Duncan's environment and was reviewed on an annual basis.	No exceptions noted.

Organization and Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC1.3 The entity has established procedures to evaluate the competency of personnel responsible for designing, developing, implementing, operating, maintaining, and monitoring the system affecting security and provides resources necessary for personnel to fulfill their responsibilities.	**EL-2:** Formal job descriptions have been documented and maintained to outline employee roles and responsibilities.	*Refer to test performed at CC1.1*	No exceptions noted.
	EL-3: Background checks are conducted for validation against the requirements, responsibilities and expectations of the proposed position.	For a sample employees, inspected background check documentation to determine whether background checks were performed prior to DRIVE access provisioning.	No exceptions noted.
	EL-4: The COBC is provided for all employees and available on Navient's intranet. Employees sign acknowledgement of receipt upon hire within the Learning Management System.	Inspected a screenshot of the Navient intranet to determine whether the COBC was available to all employees. Inspected the listing of DRIVE users to determine that no new hires were provisioned access to DRIVE during the examination period.	**Availability of the COBC:** No exceptions noted. **New Hire Acknowledgement:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	EL-5: Annual performance evaluations are conducted for each employee.	Inspected the Performance Management system to determine that the annual performance evaluations were completed outside of the testing period.	The operating effectiveness of this control could not be tested as there were no related activity during the examination period.

Organization and Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC1.3 *(continued)* The entity has established procedures to evaluate the competency of personnel responsible for designing, developing, implementing, operating, maintaining, and monitoring the system affecting security and provides resources necessary for personnel to fulfill their responsibilities.	**EL-6:** Employees are required to complete Security Awareness Training at the time of hire and on an annual basis. Corporate Compliance monitors the completion status of training and notifies employees and management when trainings are past due.	*Refer to test performed at CC1.2*	**Annual Training:** No exceptions noted. **New Hire Training:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
CC1.4 The entity has established workforce conduct standards, implemented workforce candidate background screening procedures, and conducts enforcement procedures to enable it to meet its commitments and system requirements as they relate to security.	**EL-2:** Formal job descriptions have been documented and maintained to outline employee roles and responsibilities.	*Refer to test performed at CC1.1*	No exceptions noted.
	EL-3: Background checks are conducted for validation against the requirements, responsibilities and expectations of the proposed position.	*Refer to test performed at CC1.3*	No exceptions noted.
	EL-4: The COBC is provided for all employees and available on Navient's intranet. Employees sign acknowledgement of receipt upon hire within the Learning Management System.	*Refer to test performed at CC1.3*	**Availability of the COBC:** No exceptions noted. **New Hire Acknowledgement:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

Organization and Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC1.4 *(continued)* The entity has established workforce conduct standards, implemented workforce candidate background screening procedures, and conducts enforcement procedures to enable it to meet its commitments and system requirements as they relate to security.	**EL-5:** Annual performance evaluations are conducted for each employee.	*Refer to test performed at **CC1.3***	The operating effectiveness of this control could not be tested as there were no related activity during the examination period.
	EL-6: Employees are required to complete Security Awareness Training at the time of hire and on an annual basis. Corporate Compliance monitors the completion status of training and notifies employees and management when trainings are past due.	*Refer to test performed at **CC1.2***	**Annual Training:** No exceptions noted. **New Hire Training:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

CC2.0 Common Criteria Related to Communications

Common Criteria Related to Communications			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC2.1 Information regarding the design and operation of the system and its boundaries has been prepared and communicated to authorized internal and external users of the system to permit users to understand their role in the system and the results of system operation.	**EL-6:** Employees are required to complete Security Awareness Training at the time of hire and on an annual basis. Corporate Compliance monitors the completion status of training and notifies employees and management when trainings are past due.	*Refer to test performed at **CC1.2***	**Annual Training:** No exceptions noted. **New Hire Training:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	EL-7: A MSA or Subscriber Agreement is formalized and signed before services are provided. These contracts outline information security requirements for both the parties engaged.	For a sample of new/renewed clients, inspected the service agreements to determine whether the agreements were formalized and signed, and whether the agreements outlined information security requirements.	No exceptions noted.
	EL-8: The following policies and procedures have been developed, are reviewed annually and are available to authorized employees through an internal portal: > Termination Policy > Change Management > Incident Response > Information Security > Physical Security Policy	*Refer to test performed at **CC1.2***	No exceptions noted.

Common Criteria Related to Communications

Trust Services Criteria	Controls Specified by Duncan	Tests Performed by Baker Tilly	Results of Tests
CC2.1 *(continued)* Information regarding the design and operation of the system and its boundaries has been prepared and communicated to authorized internal and external users of the system to permit users to understand their role in the system and the results of system operation.	**EL-9:** Client Onboarding Procedures (Subscriber Agreement) exist to provide instructions on input/output of data required.	Inspected Subscriber Agreement documentation to determine whether the Subscriber Agreement existed and provided instructions on input/output of data required.	No exceptions noted.
	EL-10: Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
	EL-11: Confirmation emails are sent to clients to notify when files have been received by Duncan and when files are returned to clients.	Inspected email correspondence and configuration components of the job configuration to determine whether confirmation emails were sent to clients to notify when files were received by Duncan and when files were returned to clients.	No exceptions noted.

Common Criteria Related to Communications			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC2.2 The entity's security commitments are communicated to external users, as appropriate, and those commitments and the associated system requirements are communicated to internal system users to enable them to carry out their responsibilities.	**EL-6:** Employees are required to complete Security Awareness Training at the time of hire and on an annual basis. Corporate Compliance monitors the completion status of training and notifies employees and management when trainings are past due.	*Refer to test performed at **CC1.2***	**Annual Training:** No exceptions noted. **New Hire Training:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	EL-7: A MSA or Subscriber Agreement is formalized and signed before services are provided. These contracts outline information security requirements for both the parties engaged.	*Refer to test performed at **CC2.1***	No exceptions noted.
	EL-8: The following policies and procedures have been developed, are reviewed annually and are available to authorized employees through an internal portal: > Termination Policy > Change Management > Incident Response > Information Security > Physical Security Policy	*Refer to test performed at **CC1.2***	No exceptions noted.
	EL-9: Client Onboarding Procedures (Subscriber Agreement) exist to provide instructions on input/output of data required.	*Refer to test performed at **CC2.1***	No exceptions noted.

Common Criteria Related to Communications			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC2.2 *(continued)* The entity's security commitments are communicated to external users, as appropriate, and those commitments and the associated system requirements are communicated to internal system users to enable them to carry out their responsibilities.	**EL-10:** Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
CC2.3 The responsibilities of internal and external users and others whose roles affect system operation are communicated to those parties.	**EL-7:** A MSA or Subscriber Agreement is formalized and signed before services are provided. These contracts outline information security requirements for both the parties engaged.	*Refer to test performed at **CC2.1***	No exceptions noted.
	EL-8: The following policies and procedures have been developed, are reviewed annually and are available to authorized employees through an internal portal: > Termination Policy > Change Management > Incident Response > Information Security > Physical Security Policy	*Refer to test performed at **CC1.2***	No exceptions noted.
	EL-9: Client Onboarding Procedures (Subscriber Agreement) exist to provide instructions on input/output of data required.	*Refer to test performed at **CC2.1***	No exceptions noted.

Common Criteria Related to Communications			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC2.3 *(continued)* The responsibilities of internal and external users and others whose roles affect system operation are communicated to those parties.	**EL-10:** Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
CC2.4 Information necessary for designing, developing, implementing, operating, maintaining, and monitoring controls, relevant to the security of the system, is provided to personnel to carry out those responsibilities.	**EL-6:** Employees are required to complete Security Awareness Training at the time of hire and on an annual basis. Corporate Compliance monitors the completion status of training and notifies employees and management when trainings are past due.	*Refer to test performed at **CC1.2***	**Annual Training:** No exceptions noted. **New Hire Training:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	EL-8: The following policies and procedures have been developed, are reviewed annually and are available to authorized employees through an internal portal: > Termination Policy > Change Management > Incident Response > Information Security > Physical Security Policy	*Refer to test performed at **CC1.2***	No exceptions noted.

Common Criteria Related to Communications			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC2.4 *(continued)* Information necessary for designing, developing, implementing, operating, maintaining, and monitoring controls, relevant to the security of the system, is provided to personnel to carry out those responsibilities.	**EL-10:** Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
CC2.5 Internal and external users have been provided with information on how to report security failures, incidents, concerns, and other complaints to appropriate personnel.	**EL-7:** A MSA or Subscriber Agreement is formalized and signed before services are provided. These contracts outline information security requirements for both the parties engaged.	*Refer to test performed at **CC2.1***	No exceptions noted.
	EL-8: The following policies and procedures have been developed, are reviewed annually and are available to authorized employees through an internal portal: > Termination Policy > Change Management > Incident Response > Information Security > Physical Security Policy	*Refer to test performed at **CC1.2***	No exceptions noted.

Common Criteria Related to Communications			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC2.5 *(continued)* Internal and external users have been provided with information on how to report security failures, incidents, concerns, and other complaints to appropriate personnel.	**EL-10:** Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
	IT-1: The Security Incident Response Program has been developed, approved by senior management and implemented. Incidents are researched and resolved through the Track-It! ticketing system.	Inspected the Security Incident Response Program to determine whether it was approved by senior management. Performed corroborative inquiry with Duncan Management to determine that there were no security incidents during the examination period.	**Security Incident Respons Program:** No exceptions noted. **Security Incidents:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

Common Criteria Related to Communications

Trust Services Criteria	Controls Specified by Duncan	Tests Performed by Baker Tilly	Results of Tests
CC2.6 System changes that affect internal and external users' responsibilities or the entity's commitments and system requirements relevant to security are communicated to those users in a timely manner.	**EL-7:** A MSA or Subscriber Agreement is formalized and signed before services are provided. These contracts outline information security requirements for both the parties engaged.	*Refer to test performed at **CC2.1***	No exceptions noted.
	EL-10: Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
	IT-1: The Security Incident Response Program has been developed, approved by senior management and implemented. Incidents are researched and resolved through the Track-It! ticketing system.	*Refer to test performed at **CC2.5***	**Security Incident Response Program:** No exceptions noted. **Security Incidents:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

CC3.0 Common Criteria Related to Risk Management and Design and Implementation of Controls

Risk Management and Design and Implementation of Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC3.1 The entity (1) identifies potential threats that could impair system security commitments and system requirements (including threats arising from the use of vendors and other third parties providing goods and services, as well as threats arising from customer personnel and others with access to the system); (2) analyzes the significance of risks associated with the identified threats; (3) determines mitigation strategies for those risks (including implementation of controls, assessment and monitoring of vendors and other third parties providing goods or services, as well as their activities, and other mitigation strategies); (4) identifies and assesses changes (for example, environmental, regulatory, and technological changes and results of the assessment and monitoring of controls) that could significantly affect the system of internal control; and (5) reassesses, and revises as necessary, risk assessments and mitigation strategies based on the identified changes.	**IT-2:** Duncan conducts an annual risk assessment of the information systems that process, store, or transmit customer information. The risk assessment includes identifying reasonably foreseeable internal and external risks/threats to the security, and assessing the likelihood and magnitude of harm from the unauthorized disclosure, misuse, alteration, destruction, or other compromise of such information.	Inspected the annual risk assessment to determine whether Duncan evaluated internal and external risks on an annual basis.	No exceptions noted.
	IT-3: Vendor Management procedures are in place to perform reviews of critical vendors. On an annual basis, the Director of Data Center Services will review the due diligence report from subservice organizations.	Inspected the annual vendor review to determine whether Duncan performed a review of critical vendors.	No exceptions noted.
	IT-4: Vulnerability scans against all servers are run at least monthly. Network Security, System Administration and Application Development teams assess and research known vulnerabilities and their threat to the Duncan environment to determine patch applicability and priority.	For a sample of months, inspected the monthly vulnerability scan results to determine whether Duncan reviewed vulnerabilities and took steps to remediate any findings.	No exceptions noted.

Risk Management and Design and Implementation of Controls

Trust Services Criteria	Controls Specified by Duncan	Tests Performed by Baker Tilly	Results of Tests
CC3.1 *(continued)* The entity (1) identifies potential threats that could impair system security commitments and system requirements (including threats arising from the use of vendors and other third parties providing goods and services, as well as threats arising from customer personnel and others with access to the system); (2) analyzes the significance of risks associated with the identified threats; (3) determines mitigation strategies for those risks (including implementation of controls, assessment and monitoring of vendors and other third parties providing goods or services, as well as their activities, and other mitigation strategies); (4) identifies and assesses changes (for example, environmental, regulatory, and technological changes and results of the assessment and monitoring of controls) that could significantly affect the system of internal control; and (5) reassesses, and revises as necessary, risk assessments and mitigation strategies based on the identified changes.	IT-5: External and internal penetration testing is performed at least once a year and after any significant infrastructure or application upgrade or modification. The penetration tests include network-layer penetration tests and application-layer penetration tests. The tests are performed by a qualified internal resource or qualified external third-party. Exploitable vulnerabilities found during penetration testing are corrected and testing is repeated to verify the corrections.	Performed corroborative inquiry to determine that no penetration testing occurred during the examination period.	The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

Risk Management and Design and Implementation of Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC3.2 The entity designs, develops, implements, and operates controls, including policies and procedures, to implement its risk mitigation strategy, reassesses the suitability of the design and implementation of control activities based on the operation and monitoring of those activities, and updates the controls, as necessary.	**IT-2:** Duncan conducts an annual risk assessment of the information systems that process, store, or transmit customer information. The risk assessment includes identifying reasonably foreseeable internal and external risks/threats to the security, and assessing the likelihood and magnitude of harm from the unauthorized disclosure, misuse, alteration, destruction, or other compromise of such information.	*Refer to test performed at **CC3.1***	No exceptions noted.
	IT-3: Vendor Management procedures are in place to perform reviews of critical vendors. On an annual basis, the Director of Data Center Services will review the due diligence report from subservice organizations.	*Refer to test performed at **CC3.1***	No exceptions noted.
	IT-4: Vulnerability scans against all servers are run at least monthly. Network Security, System Administration and Application Development teams assess and research known vulnerabilities and their threat to the Duncan environment to determine patch applicability and priority.	*Refer to test performed at **CC3.1***	No exceptions noted.

Risk Management and Design and Implementation of Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC3.2 *(continued)* The entity designs, develops, implements, and operates controls, including policies and procedures, to implement its risk mitigation strategy, reassesses the suitability of the design and implementation of control activities based on the operation and monitoring of those activities, and updates the controls, as necessary.	**EL-10:** Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
	IT-5: External and internal penetration testing is performed at least once a year and after any significant infrastructure or application upgrade or modification. The penetration tests include network-layer penetration tests and application-layer penetration tests. The tests are performed by a qualified internal resource or qualified external third-party. Exploitable vulnerabilities found during penetration testing are corrected and testing is repeated to verify the corrections.	*Refer to test performed at **CC3.1***	The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

CC4.0 Common Criteria Related to Monitoring of Controls

Monitoring of Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC4.1 The design and operating effectiveness of controls are periodically evaluated against the entity's commitments and system requirements as they relate to security and corrections and other necessary actions relating to identified deficiencies are taken in a timely manner.	**IT-1:** The Security Incident Response Program has been developed, approved by senior management and implemented. Incidents are researched and resolved through the Track-It! ticketing system.	*Refer to test performed at **CC2.5***	**Security Incident Response Program:** No exceptions noted. **Security Incidents:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	IT-2: Duncan conducts an annual risk assessment of the information systems that process, store, or transmit customer information. The risk assessment includes identifying reasonably foreseeable internal and external risks/threats to the security, and assessing the likelihood and magnitude of harm from the unauthorized disclosure, misuse, alteration, destruction, or other compromise of such information.	*Refer to test performed at **CC3.1***	No exceptions noted.
	IT-4: Vulnerability scans against all servers are run at least monthly. Network Security, System Administration and Application Development teams assess and research known vulnerabilities and their threat to the Duncan environment to determine patch applicability and priority.	*Refer to test performed at **CC3.1***	No exceptions noted.

Monitoring of Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC4.1 *(continued)* The design and operating effectiveness of controls are periodically evaluated against the entity's commitments and system requirements as they relate to security and corrections and other necessary actions relating to identified deficiencies are taken in a timely manner.	**EL-10:** Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.
	IT-5: External and internal penetration testing is performed at least once a year and after any significant infrastructure or application upgrade or modification. The penetration tests include network-layer penetration tests and application-layer penetration tests. The tests are performed by a qualified internal resource or qualified external third-party. Exploitable vulnerabilities found during penetration testing are corrected and testing is repeated to verify the corrections.	*Refer to test performed at **CC3.1***	The operating effectiveness of this control could not be tested as there was no related activity during the examination period.

CC5.0 Common Criteria Related to Logical and Physical Access Controls

Logical and Physical Access Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC5.1 Logical access security software, infrastructure, and architectures have been implemented to support (1) identification and authentication of authorized internal and external users; (2) restriction of authorized internal and external user access to system components, or portions thereof, authorized by management, including hardware, data, software, mobile devices, output, and offline elements; and (3) prevention and detection of unauthorized access to meet the entity's commitments and system requirements as they relate to security.	**LS-1:** A Password Policy document defines the password configuration parameters. Each system is set to adhere to the Password Policy.	Inspected the Password Policy and password configuration components to determine whether parameters aligned with the Password Policy.	No exceptions noted.
	LS-4: Security credentials for connections to third-party data sources are secured by Duncan security administrators.	Inspected screenshots of the document used to store third-party data source credentials to determine whether security credentials were secured.	No exceptions noted.

Logical and Physical Access Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC5.1 *(continued)* Logical access security software, infrastructure, and architectures have been implemented to support (1) identification and authentication of authorized internal and external users; (2) restriction of authorized internal and external user access to system components, or portions thereof, authorized by management, including hardware, data, software, mobile devices, output, and offline elements; and (3) prevention and detection of unauthorized access to meet the entity's commitments and system requirements as they relate to security.	**LS-7:** The SFTP server is configured to lock multiple failed IP login attempts.	Inspected system configuration components to determine whether the SFTP server was configured to lock multiple failed IP login attempts.	No exceptions noted.
	LS-8: Firewalls are in place to restrict access from outside the boundaries of the system. Access to the firewall rule sets is limited to IT Management.	Inspected the firewall rule sets and access lists to determine whether firewalls were in place and was restricted to IT Management.	No exceptions noted.

Logical and Physical Access Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC5.2 New internal and external system users, whose access is administered by the entity, are registered and authorized prior to being issued system credentials and granted the ability to access the system to meet the entity's commitments and system requirements as they relate to security. For those users whose access is administered by the entity, user system credentials are removed when user access is no longer authorized.	**LS-2:** New user requests are generated within the SharePoint site. Requests are filled out, detailing new user title and access requirements. Requests are sent to IT where access is provisioned. Additional requests for DRIVE access require a separate form for approval by the business owner.	For a sample of new DRIVE users, inspected the Track-It! ticket documentation and the separate form for DRIVE access to determine whether appropriate access was granted to new hires following proper authorization.	No exceptions noted.
	LS-3: On a daily basis, the IT Shared Services Team receives a report from HR listing terminations, job changes and promotions. Each entry is reviewed to determine whether the user had access to relevant systems and is removed within two business days.	Inspected the daily termination report to determine that no DRIVE employees were terminated during the examination period.	The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	LS-4: Security credentials for connections to third-party data sources are secured by Duncan security administrators.	*Refer to test performed at CC5.1*	No exceptions noted.
	LS-5: Access rights are reviewed to confirm users have access to the appropriate roles/functions within the system. Based upon the results of the review(s), unnecessary accounts or rights are disabled or removed.	Inspected system components and review documentation to determine whether system access was reviewed and that any unnecessary accounts or rights were disabled or removed.	No exceptions noted.

Logical and Physical Access Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC5.3 Internal and external users are identified and authenticated when accessing the system components (for example, infrastructure, software, and data) to meet the entity's commitments and system requirements as they relate to security.	**LS-1:** A Password Policy document defines the password configuration parameters. Each system is set to adhere to the Password Policy.	*Refer to test performed at CC5.1*	No exceptions noted.
	LS-4: Security credentials for connections to third-party data sources are secured by Duncan security administrators.	*Refer to test performed at CC5.1*	No exceptions noted.
	LS-7: The SFTP server is configured to lock multiple failed IP login attempts.	*Refer to test performed at CC5.1*	No exceptions noted.
	LS-8: Firewalls are in place to restrict access from outside the boundaries of the system. Access to the firewall rule sets is limited to IT Management.	*Refer to test performed at CC5.1*	No exceptions noted.

Logical and Physical Access Controls

Trust Services Criteria	Controls Specified by Duncan	Tests Performed by Baker Tilly	Results of Tests
CC5.4 Access to data, software, functions, and other IT resources is authorized and modified or removed based on roles, responsibilities, or the system design and changes to meet the entity's commitments and system requirements as they relate to security.	**LS-2:** New user requests are generated within the SharePoint site. Requests are filled out, detailing new user title and access requirements. Requests are sent to IT where access is provisioned. Additional requests for DRIVE access require a separate form for approval by the business owner.	*Refer to test performed at **CC5.2***	No exceptions noted.
	LS-3: On a daily basis, the IT Shared Services Team receives a report from HR listing terminations, job changes and promotions. Each entry is reviewed to determine whether the user had access to relevant systems and is removed within two business days.	*Refer to test performed at **CC5.2***	The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	LS-4: Security credentials for connections to third-party data sources are secured by Duncan security administrators.	*Refer to test performed at **CC5.1***	No exceptions noted.
	LS-5: Access rights are reviewed to confirm users have access to the appropriate roles/functions within the system. Based upon the results of the review(s), unnecessary accounts or rights are disabled or removed.	*Refer to test performed at **CC5.2***	No exceptions noted.

Logical and Physical Access Controls

Trust Services Criteria	Controls Specified by Duncan	Tests Performed by Baker Tilly	Results of Tests
CC5.5 Physical access to facilities housing the system (for example, data centers, backup media storage, and other sensitive locations, as well as sensitive system components within those locations) is restricted to authorized personnel to meet the entity's commitments and system requirements as they relate to security.	**PS-1:** The Duncan Physical Security Policy facilitates the implementation of the physical and environmental protection policy and associated physical and environmental protection controls. This document is made available to the appropriate personnel, and is reviewed, updated, and approved annually. Items addressed within the physical security policy and procedures include, but are not limited to, building security information, access security, locks and key systems, emergency procedures, and threat reporting.	Inspected the Physical Security Policy and the SharePoint site to determine whether the Physical Security Policy was available to users and approved on an annual basis.	No exceptions noted.
	PS-2: Each door, entrance and exit that provides exterior access to a company building or office space from the outside or from shared or common tenant spaces is physically secured, controlled and monitored, via devices such as badge readers.	Observed the entrances to Duncan's offices to determine whether Company space was secured, controlled and monitored with badge readers.	No exceptions noted.
	PS-3: The Physical Security Policy contains procedures and controls that are in place to verify individual access authorizations before granting access to the facility. Each Duncan facility employs an access control system that grants facility access based on credentials within an identification badge. Badge access is modified upon notification of transfer.	Inspected the Physical Security Policy to determine whether the policy existed and was approved. Inspected the list of users with badge access to determine that no users with DRIVE access had facility access provisioned during the examination period.	**Policy:** No exceptions noted. **Granting of Access:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period for provisioning of a user.

Logical and Physical Access Controls

Trust Services Criteria	Controls Specified by Duncan	Tests Performed by Baker Tilly	Results of Tests
CC5.5 *(continued)* Physical access to facilities housing the system (for example, data centers, backup media storage, and other sensitive locations, as well as sensitive system components within those locations) is restricted to authorized personnel to meet the entity's commitments and system requirements as they relate to security.	**PS-4:** In accordance with the Duncan Physical Security Program, all guests and visitors entering a company facility sign in at the building main reception area so that a record of the visit is established. Procedures are in place to issue, manage, and track badge cards for visitors. Upon signing in, all non-employee visitors are provided with an identification badge that must be worn and displayed at all times while on the premises. The Visitor badge is a visual identifier only and does not provide access to any exterior or interior entrance door. The Visitor badge is returned at the end of the day or when departing the facility.	Observed and inspected the Visitor Log and guest escort process to determine whether guests were required to sign in to receive guest badge access to Duncan's facility.	No exceptions noted.
	PS-5: Access to the production data center is reviewed annually. Unauthorized access is removed.	Inspected the annual access review to determine whether the review was completed and unauthorized access was removed, if needed.	**Exception noted:** Evidence of the annual data center access review was unavailable.
	PS-6: On a daily basis, the IT Shared Services Team receives a report from HR listing terminations, job changes and promotions. Each entry is reviewed to determine whether the user had access to the facilities. Badge access is revoked in accordance with the Physical Security Policy.	For a sample of all Duncan terminated users, inspected the Track-It! ticket to determine whether badge access was timely revoked upon termination.	**Exception noted:** For two of eight terminated users tested, badge access was not revoked in accordance with the Physical Security Policy.

Logical and Physical Access Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC5.6 Logical access security measures have been implemented to protect against security threats from sources outside the boundaries of the system to meet the entity's commitments and system requirements.	**CO-3:** Data at rest in Duncan environment is encrypted.	Inspected configuration components of disk encryption and key storage to determine whether data at rest in the Duncan environment was encrypted.	No exceptions noted.
	LS-1: A Password Policy document defines the password configuration parameters. Each system is set to adhere to the Password Policy.	*Refer to test performed at **CC5.1***	No exceptions noted.
	LS-4: Security credentials for connections to third-party data sources are secured by Duncan security administrators.	*Refer to test performed at **CC5.1***	No exceptions noted.
	LS-6: Virus, malware, and spyware definitions are automatically updated to ensure the Duncan network environment is protected from new threats.	Inspected system configuration components to determine whether Duncan's antivirus was automatically updated.	No exceptions noted.
	LS-7: The SFTP server is configured to lock multiple failed IP login attempts.	*Refer to test performed at **CC5.1***	No exceptions noted.
	LS-8: Firewalls are in place to restrict access from outside the boundaries of the system. Access to the firewall rule sets is limited to IT Management.	*Refer to test performed at **CC5.1***	No exceptions noted.

Logical and Physical Access Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC5.7 The transmission, movement, and removal of information is restricted to authorized users and processes, and is protected during transmission, movement, or removal enabling the entity to meet its commitments and requirements as they relate to security.	**CO-1:** An event log monitoring system is in place to alert for unusual or suspicious activity within the Duncan environment.	Inspected the alert configuration for failed logins to determine whether an event log monitoring system was in place to alert Duncan of unusual or suspicious activity.	No exceptions noted.
	CO-2: Data transmissions managed by Duncan are secured.	Inspected configuration components to determine whether data transmissions managed by Duncan were secured.	No exceptions noted.
	CO-3: Data at rest in Duncan environment is encrypted.	*Refer to test performed at **CC5.6***	No exceptions noted.
	LS-8: Firewalls are in place to restrict access from outside the boundaries of the system. Access to the firewall rule sets is limited to IT Management.	*Refer to test performed at **CC5.1***	No exceptions noted.

Logical and Physical Access Controls			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC5.8 Controls have been implemented to prevent or detect and act upon the introduction of unauthorized or malicious software to meet the entity's commitments and system requirements as they relate to security.	**CO-1:** An event log monitoring system is in place to alert for unusual or suspicious activity within the Duncan environment.	*Refer to test performed at **CC5.7***	No exceptions noted.
	CO-2: Data transmissions managed by Duncan are secured.	*Refer to test performed at **CC5.7***	No exceptions noted.
	IT-4: Vulnerability scans against all servers are run at least monthly. Network Security, System Administration and Application Development teams assess and research known vulnerabilities and their threat to the Duncan environment to determine patch applicability and priority.	*Refer to test performed at **CC3.1***	No exceptions noted.
	LS-6: Virus, malware, and spyware definitions are automatically updated to ensure the Duncan network environment is protected from new threats.	*Refer to test performed at **CC5.6***	No exceptions noted.
	LS-8: Firewalls are in place to restrict access from outside the boundaries of the system. Access to the firewall rule sets is limited to IT Management.	*Refer to test performed at **CC5.1***	No exceptions noted.

CC6.0 Common Criteria Related to System Operations

System Operations			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC6.1 Vulnerabilities of system components to security breaches and incidents due to malicious acts, natural disasters, or errors are identified, monitored, and evaluated, and countermeasures are designed, implemented, and operated to compensate for known and newly identified vulnerabilities to meet the entity's commitments and system requirements as they relate to security.	**CO-1:** An event log monitoring system is in place to alert for unusual or suspicious activity within the Duncan environment.	*Refer to test performed at CC5.7*	No exceptions noted.
	IT-4: Vulnerability scans against all servers are run at least monthly. Network Security, System Administration and Application Development teams assess and research known vulnerabilities and their threat to the Duncan environment to determine patch applicability and priority.	*Refer to test performed at CC3.1*	No exceptions noted.
	IT-5: External and internal penetration testing is performed at least once a year and after any significant infrastructure or application upgrade or modification. The penetration tests include network-layer penetration tests and application-layer penetration tests. The tests are performed by a qualified internal resource or qualified external third-party. Exploitable vulnerabilities found during penetration testing are corrected and testing is repeated to verify the corrections.	*Refer to test performed at CC3.1*	The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	LS-6: Virus, malware, and spyware definitions are automatically updated to ensure the Duncan network environment is protected from new threats.	*Refer to test performed at CC5.1*	No exceptions noted.

System Operations			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC6.2 Security incidents, including logical and physical security breaches, failures, and identified vulnerabilities, are identified and reported to appropriate personnel and acted on in accordance with established incident response procedures to meet the entity's commitments and system requirements.	**CO-1:** An event log monitoring system is in place to alert for unusual or suspicious activity within the Duncan environment.	*Refer to test performed at CC5.7*	No exceptions noted.
	IT-1: The Security Incident Response Program has been developed, approved by senior management and implemented. Incidents are researched and resolved through the Track-It! ticketing system.	*Refer to test performed at CC2.5*	**Security Incident Response Program:** No exceptions noted. **Security Incidents:** The operating effectiveness of this control could not be tested as there was no related activity during the examination period.
	IT-4: Vulnerability scans against all servers are run at least monthly. Network Security, System Administration and Application Development teams assess and research known vulnerabilities and their threat to the Duncan environment to determine patch applicability and priority.	*Refer to test performed at CC3.1*	No exceptions noted.

CC7.0 Common Criteria Related to Change Management

Change Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC7.1 Security commitments and system requirements, as they relate to security, are addressed during the system development lifecycle, including the authorization, design, acquisition, implementation, configuration, testing, modification, approval, and maintenance of system components.	**CM-1:** Processes and controls are integrated throughout the SDLC and change management processes which identify tasks, security checkpoints, approvals and ownership. Emergency change procedures are documented within the Change Management Standard.	Inspected the IT Change Management Policy to determine whether change management procedures were in place.	No exceptions noted.
	CM-5: Development and production environments are segregated.	Inspected screenshots of the production and development environments log in screens to determine whether production and development environments were segregated.	No exceptions noted.

Change Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC7.2 Infrastructure, data, software, and policies and procedures are updated as necessary to remain consistent with the entity's commitments and system requirements as they relate to security.	**CM-1:** Processes and controls are integrated throughout the SDLC and change management processes which identify tasks, security checkpoints, approvals and ownership. Emergency change procedures are documented within the Change Management Standard.	*Refer to test performed at **CC7.1***	No exceptions noted.
	EL-10: Duncan has a documented Information Security Policy that describes the security configuration and management of the network systems. The Information Security Policy requires systems to be configured in order to ensure users can be held accountable for their actions, appropriately considers IT general controls, and has been updated as necessary and reviewed on an annual basis.	*Refer to test performed at **CC1.2***	No exceptions noted.

Change Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC7.3 Change management processes are initiated when deficiencies in the design or operating effectiveness of controls are identified during system operation and are monitored to meet the entity's commitments and system requirements as they relate to security.	**CM-2:** Changes (including emergency changes) to Duncan applications are documented within Track-It! and may require business owner authorization or justification, depending on the type of change and platform. Changes to Duncan applications also require IT management approval to implement.	For a sample of changes, inspected the change ticket and change request form to determine whether changes were approved prior to being implemented.	No exceptions noted.
	CM-3: Patch updates are managed through System Center Configuration Management where patches are reviewed and tested prior to implementing.	For a sample of months, inspected the patch change ticket and the Nessus scan results to determine whether patches were reviewed and approved prior to implementing.	No exceptions noted.
	CM-4: Application developers must provide technical specifications for application changes to an appropriate person for review and approval based on the project participation matrix.	For a sample of changes, inspected the change ticket and change request form to determine whether changes specifications were provided and approved based on the project participation matrix.	No exceptions noted.

Change Management			
Trust Services Criteria	**Controls Specified by Duncan**	**Tests Performed by Baker Tilly**	**Results of Tests**
CC7.4 Changes to system components are authorized, designed, developed, configured, documented, tested, approved, and implemented to meet the entity's security commitments and system requirements.	**CM-2:** Changes (including emergency changes) to Duncan applications are documented within Track-It! and may require business owner authorization or justification, depending on the type of change and platform. Changes to Duncan applications also require IT management approval to implement.	*Refer to test performed at **CC7.3***	No exceptions noted.
	CM-3: Patch updates are managed through System Center Configuration Management where patches are reviewed and tested prior to implementing.	*Refer to test performed at **CC7.3***	No exceptions noted.
	CM-4: Application developers must provide technical specifications for application changes to an appropriate person for review and approval based on the project participation matrix.	*Refer to test performed at **CC7.3***	No exceptions noted.
	CM-5: Development and production environments are segregated.	*Refer to test performed at **CC7.1***	No exceptions noted.

5. Other Information Provided by Duncan Solutions, Inc.

The information included in this Section 5 is presented by management of Duncan to provide information regarding management's responses to the identified control findings and is not part of the description. Information included within Section 5 has not been subjected to the procedures applied in the examination of the description and of the suitability of the design and operating effectiveness of the controls to meet the applicable trust services criteria.

Management's Responses to Identified Findings

ID	Duncan Control	Results of Tests	Duncan Management Response
PS-5	Access to the production data center is reviewed annually. Unauthorized access is removed.	Evidence of the annual data center access review was unavailable.	Management agrees with the finding. The data center access review was completed during the period, however, documentation of the review was not retained. The review was again completed and sign-off on in September 2018 by Duncan IT Department and indicated that no unauthorized access was needed to be removed.
PS-6	On a daily basis, the IT Shared Services Team receives a report from HR listing terminations, job changes and promotions. Each entry is reviewed to determine whether the user had access to the facilities. Badge access is revoked in accordance with the Physical Security Policy.	For two of eight terminated users tested, badge access was not revoked in accordance with the Physical Security Policy.	Management agrees with the finding. The terminated users' access was not revoked in accordance with the policy due to the data entry of the termination information not being entered into the HR system on the same day as the termination effective date. In these cases, badge access was removed within two days of the data entry day. All terminated users did have access revoked no more than five days after their effective termination date.