UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year-ended December 31, 2017

Commission File Number 0-25346

ACI WORLDWIDE, INC.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**47-0772104** **(I.R.S. Employer Identification No.)**
3520 Kraft Rd, Suite 300 **Naples, FL 34105** **(Address of principal executive offices, including zip code)**	**(239) 403-4600** **(Registrant’s telephone number, including area code)**

Securities registered pursuant to Section 12(b) of the Act: Common Stock, $.005 par value, NASDAQ Global Select Market
Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer,” and ”smaller reporting company” in Rule 12b-2 of the Act. (Check one):

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the Company’s voting common stock held by non-affiliates on June 30, 2017 (the last business day of the registrant’s most recently completed second fiscal quarter), based upon the last sale price of the common stock on that date of $22.37 was $1,973,213,810. For purposes of this calculation, executive officers, directors, and holders of 10% or more of the outstanding shares of the registrant’s common stock are deemed to be affiliates of the registrant and are excluded from the calculation.

As of February 23, 2018, there were 115,904,949 shares of the registrant’s common stock outstanding.

Documents Incorporated by Reference – Portions of the registrant’s definitive Proxy Statement for the Annual Meeting of Shareholders to be held on June 12, 2018, are incorporated by reference in Part III of this report. This registrant’s Proxy Statement will be filed with the Securities and Exchange Commission pursuant to Regulation 14A.

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Forward-Looking Statements

This report contains forward-looking statements based on current expectations that involve a number of risks and uncertainties. Generally, forward-looking statements do not relate strictly to historical or current facts and may include words or phrases such as “believes,” “will,” “expects,” “anticipates,” “intends,” and words and phrases of similar impact. The forward-looking statements are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended.

Forward-looking statements in this report include, but are not limited to, statements regarding future operations, business strategy, business environment, key trends, and, in each case, statements related to expected financial and other benefits. Many of these factors will be important in determining our actual future results. Any or all of the forward-looking statements in this report may turn out to be incorrect. They may be based on inaccurate assumptions or may not account for known or unknown risks and uncertainties. Consequently, no forward-looking statement can be guaranteed. Actual future results may vary materially from those expressed or implied in any forward-looking statements, and our business, financial condition and results of operations could be materially and adversely affected. In addition, we disclaim any obligation to update any forward-looking statements after the date of this report, except as required by law.

All of the forward-looking statements in this report are expressly qualified by the risk factors discussed in our filings with the Securities and Exchange Commission (“SEC”). Such factors include, but are not limited to, risks related to:

- increased competition;
- the performance of our strategic products, Universal Payments solutions;
- demand for our products;
- consolidations and failures in the financial services industry;
- customer reluctance to switch to a new vendor;
- the migration, or failure to migrate, customers to software as a service (“SaaS”) and platform as a service (“Platform”) solutions;
- failure to obtain renewals of customer contracts or to obtain such renewals on favorable terms;
- delay or cancellation of customer projects or inaccurate project completion estimates;
- the complexity of our products and services and the risk that they may contain hidden defects;
- compliance of our products with applicable legislation, governmental regulations, and industry standards;
- failing to comply with money transmitter rules and regulations;
- our compliance with privacy regulations;
- being subject to security breaches or viruses;
- the protection of our intellectual property;
- increasing intellectual property rights litigation;
- certain payment funding methods expose us to the credit and/or operating risk of our clients;
- business interruptions or failure of our information technology and communication systems;
- our offshore software development activities;
- operating internationally;
- global economic conditions impact on demand for our products and services;
- volatility and disruption of the capital and credit markets and adverse changes in the global economy;
- attracting and retaining employees;
- potential future litigation;
- our sale of Community Financial Services (“CFS”) assets and liabilities to Fiserv, Inc. (“Fiserv”), including potential claims arising under the transaction agreement, the transition services agreement or with respect to retained liabilities;
- future acquisitions, strategic partnerships, and investments;
- impairment of our goodwill or intangible assets;
- restrictions and other financial covenants in our credit facility;
- difficulty meeting our debt service requirements;
- the accuracy of our backlog estimates;

- exposure to unknown tax liabilities;
- the cyclical nature of our revenue and earnings and the accuracy of forecasts due to the concentration of revenue generating activity during the final weeks of each quarter; and
- volatility in our stock price.

The cautionary statements in this report expressly qualify all of our forward-looking statements. Factors that could cause actual results to differ from those expressed or implied in the forward-looking statements include, but are not limited to, those discussed in Item 1A in the section entitled “Risk Factors”.

Trademarks and Service Marks

ACI, the ACI logo, ACI Worldwide, BASE24-eps, BASE24, ACI Payment Systems, ACI Payment Systems logo, ACI Payment Systems – Trusted Globally, BASE24-atm, BASE24-Card, BASE24-pos, BASE24-Teller, Credisphere, Distra, Enguard, Money HQ, Online Resources, Payanyone, PayMyBill, Prism, Prism Credit, Prism Debit, Prism Merchant, Real-Time Digital Scanline, Red Shield, Universal Payments, UP, UP logo, IBroker, IEX, Iexchange, ACI Universal Payments, ACI Universal Payments Platform, Postilion, among others, are registered trademarks and/or registered service marks of ACI Worldwide, Inc., or one of its subsidiaries, in the United States and/or other countries. Agile Payment Solution, ACI Enterprise Banker, ACI Global Banker, ACI Retail Commerce Server, AS/X, ACI Issuer, ACI Acquirer, ACI Interchange, ACI Token Manager, ACI Payments Manager, ACI Card Management System, ACI Smart Chip Manager, ACI Dispute Management System, ACI Simulation Services for Enterprise Testing or ASSET, ACI Money Transfer System, NET24, ACI Proactive Risk Manager, PRM, ACI Case Manager System, ACI Communication Services, ACI Enterprise Security Services, ACI Web Access Services, ACI Monitoring and Management and ACI DataWise, UPP, ACI Universal Online Banker, ACI Mobile Channel Manager among others, have pending registrations or are common-law trademarks and/or service marks of ACI Worldwide, Inc., or one of its subsidiaries, in the United States and/or other countries. Other parties’ marks referred to in this report are the property of their respective owners.

PART I

ITEM 1. BUSINESS

General

ACI Worldwide, Inc. ("ACI", "ACI Worldwide", the "Company," "we," "us," or "our") is a Delaware corporation incorporated in November 1993 under the name ACI Holding, Inc. ACI is largely the successor to Applied Communications, Inc. and Applied Communications Inc. Limited, which we acquired from Tandem Computers Incorporated on December 31, 1993. On July 24, 2007, we changed our corporate name from "Transaction Systems Architects, Inc." to "ACI Worldwide, Inc." We have been marketing our products and services under the ACI Worldwide brand since 1993 and have gained significant market recognition under this brand name.

We develop, market, install, and support a broad line of software products and solutions primarily focused on facilitating real-time electronic payments. Our payment capabilities, technologies, and solutions are marketed under the brand name Universal Payments, or "UP," which describes the breadth and depth of ACI's product offerings. UP defines ACI's enterprise or "universal" payments capabilities targeting any channel, any network, and any payment type. ACI UP solutions empower customers to regain control, choice, and flexibility in today's complex payments environment, get to market more quickly, and reduce operational costs.

These products and services are used globally by banks, financial intermediaries—such as third-party electronic payment processors, payment associations, switch interchanges, merchants, and corporates, and a wide range of transaction-generating endpoints, including automated teller machines ("ATM"), merchant point-of-sale ("POS") terminals, bank branches, mobile phones, tablets, corporations, and internet commerce sites. The authentication, authorization, switching, settlement, fraud-checking, and reconciliation of electronic payments is a complex activity due to the large number of locations and variety of sources from which transactions can be generated, the large number of participants in the market, high transaction volumes, geographically dispersed networks, differing types of authorization, and varied reporting requirements. These activities are typically performed online and are conducted 24 hours a day, seven days a week.

ACI combines a global perspective with local presence to tailor electronic payment solutions for our customers. We believe that we have one of the most diverse and robust electronic payment product portfolios in the industry with application software spanning the entire payments value chain. We also believe that our strong financial performance has been attributable to our ability to design and deliver quality products and solutions coupled with our ability to identify and successfully consummate and integrate strategic acquisitions.

Fiscal 2016 Divestiture

On March 3, 2016, we completed the sale of our CFS assets and liabilities to Fiserv. The transaction included employee agreements and customer contracts as well as technology assets and intellectual property. The sale of CFS assets and liabilities enabled us to focus resources on our strategic products and new high-growth initiatives in support of large banks, merchants, and corporates worldwide.

Recent Acquisitions

Fiscal 2015 Acquisition

PAY.ON

On November 4, 2015, we completed the acquisition of PAY.ON AG and its subsidiaries ("PAY.ON"). PAY.ON was a leader in eCommerce payments gateway solutions to payment service providers globally. Their advanced platform-based solution complements and strengthens the Company's UP Merchant Payments and UP eCommerce Payments. The combined entities provide customers the ability to deliver a seamless omni-channel customer payment experience in store, mobile, and online.

Target Markets

ACI's comprehensive electronic payment solutions serve four key markets:

Banks

ACI provides payment solutions to large banks globally for both retail banking and transaction banking services. Our solutions transform banks' complex payment environments to speed time to market, reduce costs, and deliver a consistent experience to customers across channels while enabling them to prevent and rapidly react to fraudulent activity. In addition, we enable banks to meet the requirements of different real-time payment schemes and to quickly create differentiated products to meet consumer, business, and merchant demands.

Financial intermediaries

ACI's payment solutions support financial intermediaries, such as processors, networks, payment service providers ("PSPs"), and new financial technology ("FinTech") entrants. We offer these customers scalable solutions that strategically position them to innovate and achieve growth and cost efficiency, while protecting them against fraud. Our solutions also allow new entrants in the digital marketplace to access innovative payment schemes, such as the U.K. Faster Payments New Access Model.

Merchants

ACI's support of merchants globally includes Tier 1 and Tier 2 merchants, online-only merchants and the PSPs, independent selling organizations ("ISOs"), value added resellers ("VARs"), and acquirers who service them. These customers operate in a variety of verticals, including general merchandise, grocery, hospitality, dining, transportation, and others. Our solutions provide merchants with a secure, omni-channel payments platform that gives them independence from third-party payment providers. We also offer secure solutions to online-only merchants that provide consumers with a convenient and seamless way to shop.

Corporates

Within the corporate segment, ACI provides electronic bill presentment and payment ("EBPP") services to companies operating in the consumer finance, insurance, healthcare, higher education, tax, and utility categories. Our solutions enable these customers to support a wide range of payment options and provide a painless consumer payments experience that drives consumer loyalty and increases revenue.

Solutions

ACI's UP solutions span the payments ecosystem to support the electronic payment needs of banks, financial intermediaries, merchants and corporates. Our six strategic solution areas include the following:

Retail Payments

ACI offers comprehensive consumer payment solutions ranging from core payment engines to back-office support that enable banks and financial intermediaries to compete effectively in today's real-time, open payments ecosystem.

UP Retail Payments solution enables banks to accept, authorize, route and secure payment transactions. Using the orchestration capabilities of UP Framework, this solution combines legacy technology with the modern, SOA-enabled UP BASE24-eps, protecting customers' existing investment while enabling them to move to a real-time, open environment. Customers have the flexibility to operate this solution on a range of hardware options, including x86/Linux, IBM System z, IBM System p, HP NonStop and Oracle Solaris servers. This solution drives innovation and increases customer loyalty by delivering choice and consistency across channels.

ACI Card and Merchant Management solutions include comprehensive credit, debit, smart card and prepaid card issuance and management; end-to-end merchant account management and settlement; and operation of complex settlement environments through a flexible system designed to support changing business models. With proven scalability and interoperability with ACI's other payment offerings, this suite allows banks to introduce new products to their consumer segments quickly, across different markets, nationally and internationally.

Real-Time Payments

ACI supports both low- and high-value, real-time payment processing for banks and financial intermediaries globally, ensuring multi-bank, multi-currency and 24x7 payment processing capabilities, as well as complete and ongoing regulatory compliance.

UP Immediate Payments solution enables banks to meet multiple real-time payments scheme requirements globally and to quickly create differentiated products to address consumer, business and merchant demands. The solution provides gateway connectivity to any live, real-time payments scheme around the world and can serve as a modern, real-time hub. The cloud solution speeds time to market through pre-packaged offerings that are tested and proven for major schemes globally, including U.K. Faster Payments, The Clearing House Real-Time Payments System, Zelle Network and EBA RT1.

UP Real-Time Payments solution is the only global solution that allows banks to address their RTGS (Real-Time Gross Settlement), SWIFT messaging, ACH and real-time faster payments needs with a single, universal offering. The solution delivers accelerated time to market with improved management of cash flow; payments security and fraud detection capabilities; simplified connectivity to new payments types and transparency for customers in tracking their payments.

Merchant Payments

ACI provides real-time, any-to-any payment capabilities globally in both card-present and card-not-present environments.

UP Merchant Payments solution provides merchants with a vendor-agnostic, flexible and secure omni-channel payments environment through an integration of Postilion, ACI ReD Shield and ACI PAY.ON Payments Gateway. Postilion facilitates transactions generated at the point of purchase, as well as back-office functions, including prepaid, debit and credit card processing, ACH processing, electronic benefits transfer, card issuance and management, check authorization, customer loyalty programs and returned check collection. ReD Shield offers real-time fraud prevention to detect and manage domestic and cross-border payments fraud across all payment types, as well as an interactive, self-service business intelligence portal for deep insight into merchant fraud activity. Lastly, the PAY.ON Payments Gateway delivers global payments connectivity through eCommerce and mCommerce channels, including a network of more than 350 card acquirer and alternative payment methods.

UP eCommerce Payments solution is designed for PSPs, ISOs, VARs, acquirers and others that offer payment services to their merchant customer base. The cloud-based solution integrates PAY.ON Payments Gateway and ReD Shield, and is available as a white-label product.

Payments Intelligence

ACI's big data engine uses powerful analytics to deliver robust fraud prevention and detection capabilities to bank, financial intermediary, merchant, and corporate customers.

UP Payments Risk Management solution is a cloud-based, 360-degree approach to enterprise fraud management. The solution is designed to combat existing and emerging fraud threats using a combination of machine learning, fraud and payments data, advanced analytics, flexible rules and agile decision strategies. For banks and financial intermediaries, the ACI Proactive Risk Manager component gives customers real-time visibility into threats across their enterprise, including issuer card fraud, check/deposit fraud, wire fraud, merchant acquirer fraud, internal fraud and money laundering schemes at multiple perspectives, ranging from an account or customer level. For merchants, ReD Shield provides real-time fraud prevention for eCommerce and mCommerce transactions.

Digital Channels

ACI offers banks advanced cash management capabilities in a multi-tenant, cloud-based platform.

ACI Universal Online Banker is a comprehensive digital banking platform designed to meet the needs of small businesses up to large corporations. It enables banks to generate new revenues through an extensive library of APIs and payment services while delivering a compelling customer experience with a highly-intuitive user interface. Customers can use digital tools to easily manage daily collections, disbursements, information reporting and numerous other corporate cash management services.

Bill Payments

ACI meets the bill payment needs of corporate customers across numerous industries through a range of electronic bill payment solutions that help companies raise consumer satisfaction while reducing costs.

UP Bill Payment solutions enable corporate customers to electronically present bills and collect payments from consumers through a single, integrated platform that powers the entire bill payments operation. The solution overcomes internal application silos, providing a seamless consumer experience across all payment channels, payment types and methods. Customers can use UP Bill Payment solutions to power one-time payments, recurring payments, service-fee payments, disbursement services, remittance services and eBilling. The solution also simplifies treasury management operations through a broad array of reconciliation, reporting and payment servicing tools. UP Bill Payment solutions include industry-leading security, full payment card industry (PCI) compliance and privacy practices.

On Premises or On Demand Software Delivery Options

Our software solutions are offered to our customers through either a traditional term software license arrangement where the software is installed and operated on the customer premises (ACI On Premise) or through an on-demand arrangement where the solution is maintained and delivered through the cloud via our global data centers (ACI On Demand). Solutions delivered through ACI's On Demand cloud are available in either a single-tenant environment, known as a Software as a Service ("SaaS") offering, or in a multi-tenant environment, known as a platform as a service ("Platform") offering. Pricing and payment terms depend on which solutions the customer requires and their transaction volumes. Generally, customers are required to commit to a minimum contract of three to five years.

Partnerships and Industry Participation

We have two major types of third-party product partners: technology partners, with whom we work closely along with industry leaders who drive key industry trends and mandates, and business partners, with whom we either embed technology in ACI products, host third-party software in ACI's cloud as a part of our ACI on Demand ("AOD") offering, or jointly market solutions that include the products of other companies.

Technology partners help us add value to our solutions, stay abreast of current market conditions and industry developments such as standards. Technology partner organizations include Diebold, Inc. ("Diebold"), NCR Corporation ("NCR"), Wincor-Nixdorf, VISA, MasterCard, and SWIFT. In addition, ACI has membership in or participates in the relevant committees of a number of industry associations, such as the International Organization for Standardization ("ISO"), Interactive Financial eXchange Forum ("IFX"), International Payments Framework Association ("IPFA"), Banking Industry Architecture Network ("BIAN"), U.K. Cards Association, and the PCI Security Standards Council. These partnerships provide direction as it relates to the specifications that are used by the card schemes, and in some cases, manufacturers. These organizations typically look to ACI as a source of knowledge and experience to be shared in conjunction with creating and enhancing their standards. The benefit to ACI is in having the opportunity to influence these standards with concepts and ideas that will benefit ACI and ultimately our customers.

Business partner relationships extend our product portfolio, improve our ability to get our solutions to market and enhance our ability to deliver market-leading solutions. We share revenues with these business partners based on a number of factors related to overall value contribution in the delivery of the joint solution or payment type. The agreements with business partners include referral, resale, traditional original equipment manufacturer ("OEM") relationships, and transaction fee based payment-enablement partnerships. These agreements generally grant ACI the right to create an integrated solution that we host or distribute, or provide ACI access to established payment networks or capabilities. The agreements are generally worldwide in scope and have a term of several years.

We have alliances with our technology partners HP, IBM, Microsoft Corporation, Red Hat, Inc., and Oracle USA, Inc. ("Oracle"), whose industry-leading hardware and software are utilized by ACI's products. These partnerships allow us to understand developments in the partners' technology and to utilize their expertise in topics like scalability and performance testing.

The following is a list of key business partners:

- Accuity, Inc.
- Actuate Corp.
- Cardinal Commerce
- Clickatel
- DataOceans, LLC
- Discover
- Experian Information Solutions, Inc.
- FairCom Corporation
- Fidelity National Information Services, Inc.
- GFKL
- Heirloom Computing
- Hewlett-Packard Company (HP)
- International Business Machines Corporation (IBM)
- Ingenico Group
- Integrated Research Limited
- Intuit, Inc.
- iovation
- Jack Henry & Associates, Inc.
- TIBCO Software Inc.
- Lean Software Services, Inc.
- Microsoft Corporation
- Micro Focus Inc.
- Monex Deposit Company
- Monex Financial Services Limited
- Neustar, Inc.
- Noggintech
- Oracle USA, Inc.
- PanIntelligence
- Paragon Application Systems, Inc.
- PayDirect
- PayPal
- Payment21
- Payworks
- IATA—Perseuss
- ProfitStars – Jack Henry & Associates, Inc.
- Rambus Company
- Reliant Solutions
- Red Hat, Inc.

- RSA Security LLC, the Security Division of EMC Corporation
- Spectrum Message Services Pty Ltd
- Symantec Corporation

- tru-Rating
- ThreatMetrix, Inc.
- Vocalink Limited

Services

We offer our customers a wide range of professional services, including analysis, design, development, implementation, integration, and training. Our service professionals generally perform the majority of the work associated with installing and integrating our software products. In addition, we work with a limited number of systems integration and services partners, such as Accenture, LLC, Cognizant Technology Solutions Corporation, and Stanchion Payments Solution, for staff augmentation and coordinated co-prime delivery where appropriate.

We offer the following types of services for our customers:

- **Implementation Services.** We utilize a standard methodology to deliver customer project implementations across all products lines and delivery options. Within the process, we provide customers with a variety of services, including solution scoping reviews, project planning, training, site preparation, installation, product configuration, product customization, testing and go-live support, and project management throughout the project lifecycle. Implementation services are typically priced according to the level of technical expertise required.
- **Product Support Services.** These product-support-funded services are available to customers after a solution has been installed and are based on the relevant product support category. An extensive team of support analysts are available to assist customers.
- **Technical Services.** Our technical services are provided to customers who have licensed one or more of our software products. Services offered include programming and programming support, day-to-day systems operations, network operations, help desk staffing, quality assurance testing, problem resolution, system design, and performance planning and review. Technical services are typically priced according to the level of technical expertise required.
- **Education Services**. ACI courses include both theory and practical sessions to allow students to work though real business scenarios and put their newly learned skills to use. This hands-on approach ensures that the knowledge is retained and the student is more productive upon their return to the workplace. ACI's education courses provide students with knowledge at all levels, to enhance and improve their understanding of ACI products. ACI also provides further, more in-depth technical courses that allow students to use practical labs to enhance what they have learned in the classroom. The ACI trainers' ability to understand customers' systems means ACI can also provide tailored course materials for individual customers. Depending upon products purchased, training may be conducted at a dedicated education facility at one of ACI's offices, online, or at the customer site.

Customer Support

We provide our customers with product support that is available 24 hours a day, seven days a week. If requested by a customer, the product support group can remotely access that customer's systems on a real-time basis. This allows the product support group to help diagnose and correct problems to enhance the continuous availability of a customer's business-critical systems. We offer our customers both a general maintenance plan and a premium option.

- **General Maintenance.** After software installation and project completion, we provide maintenance services to customers for a monthly product support fee. Maintenance services include:
    - 24-hour hotline for priority one ("P1") problem resolution
    - Online support portal (eSupport)
    - Vendor-required mandates and updates
    - Product documentation
    - Hardware operating system compatibility
    - User group membership
- **Premium Customer Support Program.** Under the premium customer service option, referred to as the Premium Customer Support Program, each customer is assigned an experienced technician(s) to work with its system. The technician(s) typically performs functions such as:

- Configure and test software fixes
- Retrofit custom software modifications (“CSMs”) into new software releases
- Answer questions and resolve problems related to the customer’s implementation
- Maintain a detailed CSM history
- Monitor customer problems on ACI’s HELP24 hotline database on a priority basis
- Supply on-site support, available upon demand
- Perform an annual system review/health check and capacity planning exercise

We provide new releases of our products on a periodic basis. New releases of our products, which often contain minor product enhancements, are typically provided at no additional fee for customers under maintenance agreements. Agreements with our customers permit us to charge for substantial product enhancements that are not provided as part of the maintenance agreement.

Competition

The electronic payments market is highly competitive and subject to rapid change. Competitive factors affecting the market for our products and services include product features, price, availability of customer support, ease of implementation, product and company reputation, and a commitment to continued investment in research and development.

Our competitors vary by solution, geography, and market segment. Generally, our most significant competition comes from in-house information technology departments of existing and potential customers, as well as third-party electronic payments processors (some of whom are our customers). Many of these companies are significantly larger than us and have significantly greater financial, technical, and marketing resources.

Key competitors by solution include the following:

Retail Payments and Real-Time Payments

The third-party software competitors for ACI’s Retail payments and Real-Time Payments solutions are FIS, Fiserv, Finastra, Computer Sciences Corporation, NCR, OpenWay Group, and Total System Services, Inc. (“TSYS”), as well as small, regionally-focused companies such as., BPC Banking Technologies, PayEx Solutions AS, Financial Software and Systems, CR2, Lusis Payments Ltd., and Opus Software Solutions Private Limited. Primary electronic payment processing competitors in this area include global entities such as Atos Origin S.A., First Data Corporation, SiNSYS, TSYS, VISA and MasterCard, as well as regional or country-specific processors.

Merchant Payments

Competitors in the Merchant Payments solution area come from both third-party software and service providers as well as service organizations run by major banks. Third-party software and service competitors include NCR, Ingenico Group, Adyen, Worldpay Inc., GlobalCollect, Cybersource, Square, Inc., Tender Retail Inc., and VeriFone Systems, Inc. Primary competition in this space are large third-party acquirer/processors and payment service providers that offer complete solutions to the retailer.

Payments Intelligence

Principal competitors for our Payments Intelligence solution are NICE LTD, Fair Isaac Corporation, NCR, BAE Systems, FIS, Fiserv, SAS Institute, Inc., Accertify (American Express), and Cybersource (Visa), as well as dozens of smaller companies focused on niches of this segment such as anti-money laundering.

Bill Payments

The principal competitors for Bill Payment solutions are Fiserv, FIS., Jack Henry & Associates, Inc., Western Union Holdings, Inc., TouchNet Information Systems, Inc., Kubra Customer Interaction Management, WorldPay, Inc., Forte Payment Systems, Point & Pay, LLC, Nelnet, Inc. and Affiliates, Higher One, Inc., Paymentus Corp., Aliaswire Inc., and Invoice Cloud, Inc., as well as smaller vertical-specific providers.

Digital Channels

Principal competitors for our Digital Channel solutions are NCR, Bottomline Technologies, Q2 Software, Inc., Jack Henry, FIS, First Data Corporation, Fiserv and Finastra.

Research and Development

Our product development efforts focus on new products and improved versions of existing products. We facilitate user group meetings to help us determine our product strategy, development plans, and aspects of customer support. The user groups are generally organized geographically or by product lines. We believe that the timely development of new applications and enhancements is essential to maintain our competitive position in the market.

During the development of new products, we work closely with our customers and industry leaders to determine requirements. We work with device manufacturers, such as Diebold, NCR, and Wincor-Nixdorf, to ensure compatibility with the latest ATM technology. We work with network vendors, such as MasterCard, VISA, and SWIFT, to ensure compliance with new regulations or processing mandates. We work with computer hardware and software manufacturers, such as HP, IBM, Microsoft Corporation, and Oracle to ensure compatibility with new operating system releases and generations of hardware. Customers often provide additional information on requirements and serve as beta-test partners.

We have a continuous process to encourage and capture innovative product ideas. Such ideas include features as well as entire new products or service offerings. A Proof of Concept (“POC”) may be conducted in order to validate the idea. If determined to be viable, the innovation is scheduled into a Product Roadmap for development and release.

Our total research and development expenses during the years ended December 31, 2017, 2016, and 2015 were $136.9 million, $169.9 million, and $145.9 million, or 13%, 17%, and 14%, of total revenues, respectively.

Customers

We provide software products and solutions to customers in a range of industries worldwide, with banks, financial intermediaries, and merchants comprising our largest industry segments. As of December 31, 2017, we serve over 5,100 customers, including 18 of the top 20 banks worldwide, as measured by asset size, and more than 300 of the leading merchants globally, as measured by revenue, in over 80 countries on six continents. Of this total, approximately 2,000 are in the ACI On Premise reportable segment and 3,100 are in the ACI On Demand reportable segment. No single customer accounted for more than 10% of our consolidated revenues for the years ended December 31, 2017, 2016, and 2015. No customer accounted for more than 10% of our accounts receivable balance as of December 31, 2017 and 2016.

Selling and implementation

Our primary method of distribution is direct sales by employees assigned to specific target segments. Headquartered in Naples, Florida, we have principal United States sales offices in Norcross, Omaha, Princeton, and Waltham. In addition, we have sales offices located outside the United States in Athens, Bahrain, Bangkok, Beijing, Bogota, Brussels, Buenos Aires, Cape Town, Caracas, Dubai, Gouda, Johannesburg, Kuala Lumpur, Madrid, Manila, Melbourne, Mexico City, Milan, Montevideo, Moscow, Mumbai, Munich, Naples, Paris, Quito, Riyadh, Sao Paulo, Shanghai, Singapore, Stockholm, Sulzbach, Sydney, Tokyo, Toronto, and Watford.

We use distributors and referral partners to supplement our direct sales force in countries where business practices or customs make it appropriate, or where it is more economical to do so. We generate a majority of our sales leads through existing relationships with vendors, direct marketing programs, customers and prospects, or through referrals. ACI’s distributors, resellers and system integration partners are enabled to provide supplemental or complete product implementation and customization services directly to our customers or in a co-prime delivery model.

Current international distributors, resellers, sales agents, and implementation partners (collectively, “Channel Partners”) for us during the year-ended December 31, 2017 included:

- Accenture, LLC (United States)
- AGS Technology Inc. (India)
- ASI International (Colombia/Venezuela/Caribbean)
- CAPSYS Technologies, LLC (Russia/Eastern Europe)
- Channel Solutions Inc. (Philippines)
- Cognizant (United States)
- DataOne Asia Co., Ltd. (Thailand)
- DDWay (Italy)
- EFT Corporation (Sub-Saharan Africa)
- Fiserv, Inc. (United States)
- Interswitch Ltd. (Sub-Saharan Africa)
- JDA Software Group, Inc. (United States)
- Korea Computer Inc (Korea)

- Pactera (China)
- P.T. Mitra Integrasi Informatika (Indonesia)
- P.T. Abhimata Persada (Indonesia)
- Stanchion (South Africa)
- STJ-CA, Inc. (United States)
- Stream IT Consulting Ltd. (Thailand)
- STET (EU)
- Syscom Computer Co., Ltd. (Shenzhen) (China)
- Syscom Computer Engineering Co. (Taiwan)
- Tomax Corp. (United States)
- Transaction Payment Solutions (Sub-Saharan Africa)

ACI ReD Shield channel partners during the year-ended December 31, 2017 included:

- Altapay (Denmark)
- Amadeus (Spain)
- Barclaycard (U.K.)
- Bitnet (United States)
- Citrus Pay (India)
- Computop (Germany)
- Credit Call (European Union)
- Cubic Transportation (United States)
- Digital River (European Union)
- Easynollo (Italy)
- eCommera Ltd. (U.K.)
- Evo Payments (United States)
- eWay Pty Ltd. (Australia)
- Global E Online (Israel)
- Ingenico Group (Netherlands)
- Mastercard/Datacash (U.K.)
- MNP Media Ltd. (U.K.)
- Navitaire (United States)
- Nostrum (U.K.)
- PayU South Africa (South Africa)
- Planet Payments (United States)
- Sagepay (U.K.)
- Secure Trading (U.K.)
- Simplepay (Australia)
- The Logic Group (U.K.)
- UOL Diveo (Brazil)
- VeriFone Systems, Inc. (United States and European Union)

EBPP channel partners during the year-ended December 31, 2017 included:

- ACH Payment Solutions
- Adirondack Solutions
- API Outsourcing
- Avitar & Assoc. of New England
- Black Knight Financial Services
- BS&A Software

- County Information Resources Agency
- Campus Management Corp
- Competitive Edge Software
- Creative Micro – CMI

- Delta Computer Systems
- Discover
- Donald R. Frey & Co.
- FICO
- Ellucian
- ETA Data Direct
- FSSI
- Harris
- Interactive Intelligence
- LD Systems
- Megabyte Systems Inc.
- Megasys
- MoneyGram
- Ontario Systems
- Oracle/Peoplesoft
- Pay Plus (Dallas)
- Radiant 44
- RR Donnelley
- Salepoint
- Selectron
- Shaw
- Sofbang
- Solutions by Text
- SourceHOV
- Texas Association of Counties
- Thompson Reuters
- TransCentra
- Tyler Technology
- 3 Point Alliance
- Semafone

We distribute the products of other vendors where they complement our existing product lines. We are typically responsible for the sales and marketing of the vendor’s products, and agreements with these vendors generally provide for revenue sharing based on relative responsibilities.

Proprietary Rights and Licenses

We rely on a combination of trade secret and copyright laws, license agreements, contractual provisions, and confidentiality agreements to protect our proprietary rights. We distribute our software products under software license agreements that typically grant customers nonexclusive licenses to use our products. Use of our software products is usually restricted to designated computers, specified locations and/or specified capacity, and is subject to terms and conditions prohibiting unauthorized reproduction or transfer of our software products. We also seek to protect the source code of our software as a trade secret and as a copyrighted work. Despite these precautions, there can be no assurance that misappropriation of our software products and technology will not occur.

In addition to our own products, we distribute, or act as a sales agent for, software developed by third parties. However, we typically are not involved in the development process used by these third parties. Our rights to those third-party products and the associated intellectual property rights are limited by the terms of the contractual agreement between us and the respective third party.

Although we believe that our owned and licensed intellectual property rights do not infringe upon the proprietary rights of third parties, there can be no assurance that third parties will not assert infringement claims against us. Further, there can be no assurance that intellectual property protection will be available for our products in all foreign countries.

Like many companies in the electronic commerce and other high-tech industries, third parties have in the past and may in the future assert claims or initiate litigation related to patent, copyright, trademark, or other intellectual property rights to business processes, technologies, and related standards that are relevant to us and our customers. These assertions have increased over time as a result of the general increase in patent claims assertions, particularly in the United States. Third parties may also claim that the third-party’s intellectual property rights are being infringed by our customers’ use of a business process method that utilizes products in conjunction

with other products, which could result in indemnification claims against us by our customers. Any claim against us, with or without merit, could be time-consuming, result in costly litigation, cause product delivery delays, require us to enter into royalty or licensing agreements or pay amounts in settlement, or require us to develop alternative non-infringing technology. We could also be required to defend or indemnify our customers against such claims. A successful claim by a third party of intellectual property infringement or one of our customers could compel us to enter into costly royalty or license agreements, pay significant damages or even stop selling certain products and incur additional costs to develop alternative non-infringing technology.

Government Regulation

Certain of our solutions are subject to federal, state, and foreign regulations and requirements.

Oversight by Banking Regulators. As a provider of payment services to banks and financial intermediaries, we are subject to regulatory oversight and examination by the Federal Financial Institutions Examination Council ("FFIEC"), an interagency body of the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the National Credit Union Administration and various state regulatory authorities as part of the Multi-Region Data Processing Servicer Program ("MDPS"). The MDPS program includes technology suppliers who provide mission critical applications for a large number of financial institutions that are regulated by multiple regulatory agencies. Periodic information technology examination assessments are performed using FFIEC Interagency guidelines to identify potential risks that could adversely affect serviced financial institutions, determine compliance with applicable laws and regulations that affect the services provided to financial institutions and ensure the services we provide to financial institutions do not create systemic risk to the banking system or impact the safe and sound operation of the financial institutions we process. In addition, independent auditors annually review several of our operations to provide reports on internal controls for our clients' auditors and regulators. We are also subject to review under state and foreign laws and rules that regulate many of the same activities that are described above, including electronic data processing and back-office services for financial institutions and the use of consumer information.

Money Transfer. Official Payments Corporation, our EBPP affiliate, is registered as a Money Services Business. Accordingly, we are subject to the USA Patriot Act and reporting requirements of the Bank Secrecy Act and U.S. Treasury Regulations. These businesses may also be subject to certain state and local licensing requirements. The Financial Crimes Enforcement Network, state attorneys general, and other agencies have enforcement responsibility over laws relating to money laundering, currency transmission, and licensing. In addition, most states have enacted statutes that require entities engaged in money transmission to register as a money transmitter with that jurisdiction's banking department. We have implemented policies, procedures, and internal controls that are designed to comply with all applicable anti-money laundering laws and regulations. ACI has also implemented policies, procedures, and internal controls that are designed to comply with the regulations and economic sanctions programs administered by the U.S. Treasury's Office of Foreign Assets Control ("OFAC"), which enforces economic and trade sanctions against targeted foreign countries, entities and individuals based on external threats to the U.S. foreign policy, national security, or economy; by other governments; or by global or regional multilateral organizations, such as the United Nations Security Council and the European Union as applicable.

Segment Information and Foreign Operations

We derive a significant portion of our revenues from foreign operations. For detail of revenue by geographic region see Note 10, *Segment Information*, in the Notes to Consolidated Financial Statements.

Employees

As of December 31, 2017, we had a total of 3,979 employees.

None of our employees are subject to a collective bargaining agreement. We believe that relations with our employees are good.

Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"), are available free of charge on our website at www.aciworldwide.com as soon as reasonably practicable after we file such information electronically with the SEC. The information found on our website is not part of this or any other report we file with or furnish to the SEC. The public may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 100 F Street, Room 1580, NW, Washington DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

Executive Officers of the Registrant

Our executive officers, their ages and their positions were as follows.

Name	Age	Position
Philip G. Heasley	68	President, Chief Executive Officer and Director
Scott W. Behrens	46	Senior Executive Vice President, Chief Financial Officer
Daniel J. Frate	57	Group President, ACI On Demand
Carolyn B. Homberger	37	Group President, Global Sales
Craig S. Saks	47	Chief Operating Officer
Anthony M. Scotto, Jr.	61	Senior Executive Vice President, Chief of Technology
Dennis P. Byrnes	54	Executive Vice President, Chief Administrative Officer, General Counsel and Secretary

Mr. Heasley has been a director and our President and Chief Executive Officer since March 2005. Mr. Heasley has a comprehensive background in payment systems and financial services. From October 2003 to March 2005, Mr. Heasley served as Chairman and Chief Executive Officer of PayPower LLC, an acquisition and consulting firm specializing in financial services and payment services. Mr. Heasley served as Chairman and Chief Executive Officer of First USA Bank from October 2000 to November 2003. Prior to joining First USA Bank, from 1987 until 2000, Mr. Heasley served in various capacities for U.S. Bancorp, including Executive Vice President, and President and Chief Operating Officer. Mr. Heasley also serves on the National Infrastructure Advisory Council. Mr. Heasley holds a Master of Business Administration from the Bernard Baruch Graduate School of Business in New York and a Bachelor of Arts from Marist College in Poughkeepsie, New York.

Mr. Behrens serves as Senior Executive Vice President and Chief Financial Officer. Mr. Behrens joined ACI in June 2007 as our Corporate Controller and was appointed as Chief Accounting Officer in October 2007. Mr. Behrens was appointed Chief Financial Officer in December 2009. Mr. Behrens ceased serving as our Corporate Controller in December 2010. Mr. Behrens was appointed as Executive Vice President in March 2011 and promoted to Senior Executive Vice President in December of 2013. Prior to joining ACI, Mr. Behrens served as Senior Vice President, Corporate Controller and Chief Accounting Officer at SITEL Corporation from January 2005 to June 2007. He also served as Vice President of Financial Reporting at SITEL Corporation from April 2003 to January 2005. From 1993 to 2003, Mr. Behrens was with Deloitte & Touche, LLP, including two years as a Senior Audit Manager. Mr. Behrens holds a Bachelor of Science (Honors) from the University of Nebraska – Lincoln.

Mr. Frate serves as Group President, ACI On Demand. Prior to joining ACI in August of 2012, Mr. Frate was Executive Vice President at PNC Bank, where he led the retail banking products and pricing group. Mr. Frate joined PNC Bank through its acquisition of National City Corporation, where he served as Vice Chairman, leading the retail banking business. He joined National City in 2003. From 2001 to 2003, he served as President and Chief Operating Officer of Bank One Card Services. Prior to joining Bank One, Mr. Frate served as Vice Chairman of payment services at US Bank (1995 to 2001) and Executive Vice President of credit and services (1989 to 1995). Mr. Frate is a member of the Board of Directors at John Carroll University. Mr. Frate holds a Master of Science in Finance from Krannert School of Management at Purdue University and a Bachelor’s degree in Economics from the School of Business at John Carroll University.

Mrs. Homberger serves as Group President, Global Sales. Mrs. Homberger joined ACI in December 2006. She has led the financial planning and analysis team and held other operational leadership positions at the Company. From 2002 to 2006, Mrs. Homberger held finance leadership roles and completed the Financial Management Program (“FMP”) at GE Healthcare. Mrs. Homberger is Six Sigma Green Belt Certified and holds a Master of Business Administration degree from Fordham University and Bachelor of Science from Miami University.

Mr. Saks serves as Chief Operating Officer. Prior to joining ACI in February 2012, Mr. Saks was Senior Vice President of Shared Services at S1 Corporation, which was subsequently acquired by ACI. From 1999 to 2007, Mr. Saks served as the Chief Operating Officer at Fundamo. Mr. Saks holds a Master of Commerce in IT Management from the University of Cape Town and a Bachelor’s degree in Accounting and Computer Science from the University of Port Elizabeth.

Mr. Scotto serves as Senior Executive Vice President, Chief of Technology. He joined ACI in March of 2010 and has more than 30 years of experience running global product development organizations. From 2006 to 2010, Mr. Scotto served as Vice President of product development at 170 Systems, Inc., which was acquired by Kofax in 2009. During his tenure at 170 Systems/Kofax he was responsible for scaling all aspects of development, including headcount, product strategy, development processes and integration with other key corporate functions. Prior to that, Mr. Scotto held executive positions in product development at Oracle, StorageNetworks, Inc., and EMC. Mr. Scotto holds an Executive Master of Business Administration from Northwestern University and a Bachelor of Science in Computer Science from the University of Connecticut.

Mr. Byrnes serves as Executive Vice President, Chief Administrative Officer, General Counsel and Secretary. He has served in that capacity since March 2011 and as General Counsel and Secretary since joining the Company in June 2003. Prior to that Mr. Byrnes served as an attorney in Bank One Corporation's technology group from 2002 to 2003 and before that with Sterling Commerce, an electronic commerce software and services company, from 1996. From 1991 to 1996 Mr. Byrnes was an attorney with Baker Hostetler. Mr. Byrnes holds a JD from The Ohio State University College of Law, a Master of Business Administration from Xavier University and a Bachelor of Science in engineering from Case Western Reserve University.

ITEM 1A. RISK FACTORS

Factors That May Affect Our Future Results or the Market Price of Our Common Stock

We operate in a rapidly changing technological and economic environment that presents numerous risks. Many of these risks are beyond our control and are driven by factors that often cannot be predicted. The following discussion highlights some of these risks.

The markets in which we compete are rapidly changing and highly competitive, and we may not be able to compete effectively.

The markets in which we compete are characterized by rapid change, evolving technologies and industry standards and intense competition. There is no assurance that we will be able to maintain our current market share or customer base. We face intense competition in our businesses and we expect competition to remain intense in the future. We have many competitors that are significantly larger than us and have significantly greater financial, technical and marketing resources, have well-established relationships with our current or potential customers, advertise aggressively or beat us to the market with new products and services. In addition, we expect that the markets in which we compete will continue to attract new competitors and new technologies. Increased competition in our markets could lead to price reductions, reduced profits, or loss of market share. The current global economic conditions could also result in increased price competition for our products and services.

To compete successfully, we need to maintain a successful research and development effort. If we fail to enhance our current products and develop new products in response to changes in technology and industry standards, bring product enhancements or new product developments to market quickly enough, or accurately predict future changes in our customers' needs and our competitors develop new technologies or products, our products could become less competitive or obsolete.

Our Universal Payments strategy could prove to be unsuccessful in the market.

Our UP solutions, including our UP Retail Payments and Real-Time Payments solutions, are strategic for us, in that they are designated to help us win new accounts, replace legacy payments systems on multiple hardware platforms, and help us transition our existing customers to a new, real-time, and open-systems product architecture. Our business, financial condition, cash flows and/or results of operations could be materially adversely affected if we are unable to generate adequate sales of Universal Payments solutions or if we are unable to successfully deploy them in production environments.

Our future profitability depends on demand for our products; lower demand in the future could adversely affect our business.

Our revenue and profitability depend on the overall demand for our products and services. Historically, a majority of our total revenues resulted from licensing our BASE24 product line and providing related services and maintenance. Any reduction in demand for, or increase in competition with respect to, the BASE24 product line could have a material adverse effect on our financial condition, cash flows and/or results of operations.

We have historically derived a substantial portion of our revenues from licensing of software products that operate on HP NonStop servers. Any reduction in demand for HP NonStop servers, or any change in strategy by HP related to support of its NonStop servers, could have a material adverse effect on our financial condition, cash flows and/or results of operations.

Consolidations and failures in the financial services industry may adversely impact the number of customers and our revenues in the future.

Mergers, acquisitions and personnel changes at key financial services organizations have the potential to adversely affect our business, financial condition, cash flows, and results of operations. Our business is concentrated in the financial services industry, making us susceptible to consolidation in, or contraction of the number of participating institutions within that industry. Consolidation activity among financial institutions has increased in recent years and the current financial conditions have resulted in even further consolidation and contraction as financial institutions have failed or have been acquired by or merged with other financial institutions. There are several potential negative effects of increased consolidation activity. Continuing consolidation and failure of financial institutions could cause us to lose existing and potential customers for our products and services. For instance, consolidation of two of our customers could result in reduced revenues if the combined entity were to negotiate greater volume discounts or discontinue use of certain of our products. Additionally, if a non-customer and a customer combine and the combined entity in turn decided to forego future use of our products, our revenues would decline.

Potential customers may be reluctant to switch to a new vendor, which may adversely affect our growth, both in the United States and internationally.

For banks, financial intermediaries, and other potential customers of our products, switching from one vendor of core financial services software (or from an internally-developed legacy system) to a new vendor is a significant endeavor. Many potential customers believe switching vendors involves too many potential disadvantages such as disruption of business operations, loss of accustomed functionality, and increased costs (including conversion and transition costs). As a result, potential customers may resist change. We seek to overcome this resistance through value enhancing strategies such as a defined conversion/migration process, continued investment in the enhanced functionality of our software and system integration expertise. However, there can be no assurance that our strategies for overcoming potential customers' reluctance to change vendors will be successful, and this resistance may adversely affect our growth, both in the United States and internationally.

We may be unable to migrate customers from on-premise to on-demand software solutions.

We are engaged in a concerted effort to migrate customers from our historic on-premise solutions to on-demand software solutions. This business model continues to evolve, and we may not be able to retain customers, compete effectively, generate significant revenues or maintain the profitability of our on-demand solutions. If we do not successfully execute our on-demand solutions or anticipate the on-demand solutions needs of our customers, our reputation could be harmed and our revenues and profitability could decline.

Failure to obtain renewals of customer contracts or obtain such renewals on favorable terms could adversely affect our results of operations and financial condition.

Failure to achieve favorable renewals of customer contracts could negatively impact our business. Our contracts with our customers generally run for a period of five years. At the end of the contract term, customers have the opportunity to renegotiate their contracts with us and to consider whether to engage one of our competitors to provide products and services. Failure to achieve high renewal rates on commercially favorable terms could adversely affect our results of operations and financial condition.

The delay or cancellation of a customer project or inaccurate project completion estimates may adversely affect our operating results and financial performance.

Any unanticipated delays in a customer project, changes in customer requirements or priorities during the project implementation period, or a customer's decision to cancel a project, may adversely impact our operating results and financial performance. In addition, during the project implementation period, we perform ongoing estimates of the progress being made on complex and difficult projects and documenting this progress is subject to potential inaccuracies. Changes in project completion estimates are heavily dependent on the accuracy of our initial project completion estimates and our ability to evaluate project profits and losses. Any inaccuracies or changes in estimates resulting from changes in customer requirements, delays or inaccurate initial project completion estimates may result in increased project costs and adversely impact our operating results and financial performance.

Our software products may contain undetected errors or other defects, which could damage our reputation with customers, decrease profitability, and expose us to liability.

Our software products are complex. Software typically contains bugs or errors that can unexpectedly interfere with the operation of the software products. Our software products may contain undetected errors or flaws when first introduced or as new versions are released. These undetected errors may result in loss of, or delay in, market acceptance of our products and a corresponding loss of sales or revenues. Customers depend upon our products for mission-critical applications, and these errors may hurt our reputation with customers. In addition, software product errors or failures could subject us to product liability, as well as performance and warranty claims, which could materially adversely affect our business, financial condition, cash flows and/or results of operations.

If our products and services fail to comply with legislation, government regulations, and industry standards to which our customers are subject, it could result in a loss of customers and decreased revenue.

Legislation, governmental regulation and industry standards affect how our business is conducted, and in some cases, could subject us to the possibility of future lawsuits arising from our products and services. Globally, legislation, governmental regulation and industry standards may directly or indirectly impact our current and prospective customers' activities, as well as their expectations and needs in relation to our products and services. For example, our products are affected by VISA, MasterCard and other major payment brand electronic payment standards that are generally updated twice annually. Beyond this, our products are effected by PCI Security Standards. As a provider of electronic data processing to financial institutions, we must comply with FFIEC regulations and are subject to FFIEC examinations.

In addition, action by government and regulatory authorities such as the Dodd-Frank Wall Street Reform and the Consumer Protection Act relating to financial regulatory reform and the European Union-wide digital privacy law (the "EU Data Privacy Law") (which imposes imposes strict data privacy requirements and regulatory fines of up to 4% of "worldwide turnover" and is expected to become effective in 2018), as well as legislation and regulation related to credit availability, data usage, privacy, or other related regulatory developments could have an adverse effect on our customers and therefore could have a material adverse effect on our business, financial condition, cash flows and results of operations. The regulatory focus on privacy issues also continues to increase and worldwide laws and regulations concerning the handling of personal information are expanding and becoming more complex. Our failure, or perceived failure, to comply with laws and regulations concerning the handling of personal information could result in lost or restricted business, proceedings, actions or fines brought against us or levied by governmental entities or others, or could adversely affect our business and harm our reputation.

If we fail to comply with the complex regulations applicable to our payments business, we could be subject to liability or our revenues may be reduced.

Official Payments Corporation is licensed as a money transmitter in those states where such licensure is required. These licenses require us to demonstrate and maintain certain levels of net worth and liquidity, require us to file periodic reports and subject us to inspections by state regulatory agencies. In addition, our payment business is generally subject to federal regulation in the United States, including anti-money laundering regulations and certain restrictions on transactions to or from certain individuals or entities. The complexity of these regulations will continue to increase our cost of doing business. Any violations of these laws may also result in civil or criminal penalties against us and our officers or the prohibition against us providing money transmitter services in particular jurisdictions. We could also be forced to change our business practices or be required to obtain additional licenses or regulatory approvals that could cause us to incur substantial costs.

In addition, our customers must ensure that our services comply with the government regulations, including the EU Data Privacy Law, and industry standards that apply to their businesses. Federal, state, foreign or industry authorities could adopt laws, rules, or regulations affecting our customers' businesses that could lead to increased operating costs that may lead to reduced market acceptance. In addition, action by regulatory authorities relating to credit availability, data usage, privacy, or other related regulatory developments could have an adverse effect on our customers and, therefore, could have a material adverse effect on our business, financial condition, and results of operations.

If we fail to comply with privacy regulations imposed on providers of services to financial institutions, our business could be harmed.

As a provider of services to financial institutions, we may be bound by the same limitations on disclosure of the information we receive from our customers as apply to the financial institutions themselves. If we are subject to these limitations and we fail to comply with applicable regulations, including the EU Data Privacy Law, we could be exposed to suits for breach of contract or to governmental proceedings, our customer relationships and reputation could be harmed, and we could be inhibited in our ability to obtain new customers. In addition, if more restrictive privacy laws or rules are adopted in the future on the federal or state level, or, with respect to our international operations, by authorities in foreign jurisdictions on the national, provincial, state, or other level, that could have an adverse impact on our business.

Our risk management and information security programs are the subject of oversight and periodic reviews by the federal agencies that regulate our business. In the event that an examination of our information security and risk management functions results in adverse findings, such findings could be made public or communicated to our regulated financial institution customers, which could have a material adverse effect on our business.

If our security measures are breached or become infected with a computer virus, or if our services are subject to attacks that degrade or deny the ability of users to access our products or services, our business will be harmed by disrupting delivery of services and damaging our reputation.

As part of our business, we electronically receive, process, store, and transmit sensitive business information of our customers. Unauthorized access to our computer systems or databases could result in the theft or publication of confidential information or the deletion or modification of records or could otherwise cause interruptions in our operations. These concerns about security are increased when we transmit information over the Internet. Security breaches in connection with the delivery of our products and services, including products and services utilizing the Internet, or well-publicized security breaches, and the trend toward broad consumer and general public notification of such incidents, could significantly harm our business, financial condition, cash flows and/or results of operations. We cannot be certain that advances in criminal capabilities, discovery of new vulnerabilities, attempts to exploit vulnerabilities in our systems, data thefts, physical system or network break-ins or inappropriate access, or other developments will not compromise or breach the technology protecting our networks and confidential information. Computer viruses have also been distributed and have rapidly spread over the Internet. Computer viruses could infiltrate our systems, disrupting our delivery of services and making our applications unavailable. Any inability to prevent security breaches or computer viruses could also cause existing customers to lose confidence in our systems and terminate their agreements with us, and could inhibit our ability to attract new customers.

We may be unable to protect our intellectual property and technology.

To protect our proprietary rights in our intellectual property, we rely on a combination of contractual provisions, including customer licenses that restrict use of our products, confidentiality agreements and procedures, and trade secret and copyright laws. Despite such efforts, we may not be able to adequately protect our proprietary rights, or our competitors may independently develop similar technology, duplicate products, or design around any rights we believe to be proprietary. This may be particularly true in countries other than the United States because some foreign laws do not protect proprietary rights to the same extent as certain laws of the United States. Any failure or inability to protect our proprietary rights could materially adversely affect our business.

We also use a limited amount of software licensed by its authors or other third parties under so-called “open source” licenses and may continue to use such software in the future. Some of these licenses contain requirements that we make available source code for modifications or derivative works we create based upon the open source software, and that we license such modifications or derivative works under the terms of a particular open source license or other license granting third parties certain rights of further use. By the terms of certain open source licenses, we could be required to release the source code of our proprietary software if we combine our proprietary software with open source software in a certain manner. Additionally, the terms of many open source licenses have not been interpreted by United States or other courts, and there is a risk that these licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our solutions. In addition to risks related to license requirements, usage of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or controls on origin of the software.

Our exposure to risks associated with the use of intellectual property may be increased for third-party products distributed by us or as a result of acquisitions since we have a lower level of visibility, if any, into the development process with respect to such third-party products and acquired technology or the care taken to safeguard against infringement risks.

We may be subject to increasing litigation over our intellectual property rights.

There has been a substantial amount of litigation in the software industry regarding intellectual property rights. Third parties have in the past, and may in the future, assert claims or initiate litigation related to exclusive patent, copyright, trademark or other intellectual property rights to business processes, technologies and related standards that are relevant to us and our customers. These assertions have increased over time as a result of the general increase in patent claims assertions, particularly in the United States. Because of the existence of a large number of patents in the electronic commerce field, the secrecy of some pending patents and the rapid issuance of new patents, it is not economical or even possible to determine in advance whether a product or any of its components infringes or will infringe on the patent rights of others. Any claim against us, with or without merit, could be time-consuming, result in costly litigation, cause product delivery delays, require us to enter into royalty or licensing agreements or pay amounts in settlement, or require us to develop alternative non-infringing technology.

We anticipate that software product developers and providers of electronic commerce solutions could increasingly be subject to infringement claims, and third parties may claim that our present and future products infringe upon their intellectual property rights. Third parties may also claim, and we are aware that at least two parties have claimed on several occasions, that our customers’ use of a business process method which utilizes our products in conjunction with other products infringe on the third-party’s intellectual property rights. These third-party claims could lead to indemnification claims against us by our customers. Claims against our customers related to our products, whether or not meritorious, could harm our reputation and reduce demand for our products. Where indemnification claims are made by customers, resistance even to unmeritorious claims could damage the customer relationship. A successful claim by a third-party of intellectual property infringement by us or one of our customers could compel us to enter into costly royalty or license agreements, pay significant damages, or stop selling certain products and incur additional costs to develop alternative non-infringing technology. Royalty or licensing agreements, if required, may not be available on terms acceptable to us or at all, which could adversely affect our business.

Certain payment funding methods expose us to the credit and/or operating risk of our clients.

When we process an automated clearing house or automated teller machine network payment transaction for certain clients, we occasionally transfer funds from our settlement account to the intended destination account before we receive funds from a client’s source account. The vast majority of these occurrences are resolved quickly through normal processes. However, if they are not resolved and we are then unable to reverse the transaction that sent funds to the intended destination, a shortfall in our settlement account will be created. Although we have legal recourse against our clients for the amount of the shortfall, timing of recovery may be delayed by litigation or the amount of any recovery may be less than the shortfall. In either case, we would have to fund the shortfall in our settlement account from our corporate funds.

If we experience business interruptions or failure of our information technology and communication systems, the availability of our products and services could be interrupted which could adversely affect our reputation, business and financial condition.

Our ability to provide reliable service in a number of our businesses depends on the efficient and uninterrupted operation of our data centers, information technology and communication systems, and those of our external service providers. As we continue to grow our On Demand business, our dependency on the continuing operation and availability of these systems increases. Our systems and data centers, and those of our external service providers, could be exposed to damage or interruption from fire, natural disasters, power loss, telecommunications failure, unauthorized entry and computer viruses. Although we have taken steps to prevent system failures and we have installed back-up systems and procedures to prevent or reduce disruption, such steps may not be sufficient to prevent an interruption of services and our disaster recovery planning may not account for all eventualities. Further, our property and business interruption insurance may not be adequate to compensate us for all losses or failures that may occur.

An operational failure or outage in any of these systems, or damage to or destruction of these systems, which causes disruptions in our services, could result in loss of customers, damage to customer relationships, reduced revenues and profits, refunds of customer charges and damage to our brand and reputation and may require us to incur substantial additional expense to repair or replace damaged equipment and recover data loss caused by the interruption. Any one or more of the foregoing occurrences could have a material adverse effect on our reputation, business, financial condition, cash flows and results of operations.

We are engaged in offshore software development activities, which may not be successful and which may put our intellectual property at risk.

As part of our globalization strategy and to optimize available research and development resources, we utilize our Irish subsidiary to serve as the focal point for certain international product development and commercialization efforts. This subsidiary oversees remote software development operations in Romania and elsewhere, as well as manages certain of our intellectual property rights.   In addition, we manage certain offshore development activities in India. While our experience to date with our offshore development centers has been positive, there is no assurance that this will continue. Specifically, there are a number of risks associated with this activity, including but not limited to the following:

- communications and information flow may be less efficient and accurate as a consequence of the time, distance and language differences between our primary development organization and the foreign based activities, resulting in delays in development or errors in the software developed;
- in addition to the risk of misappropriation of intellectual property from departing personnel, there is a general risk of the potential for misappropriation of our intellectual property that might not be readily discoverable;
- the quality of the development efforts undertaken offshore may not meet our requirements because of language, cultural and experiential differences, resulting in potential product errors and/or delays;
- potential disruption from the involvement of the United States in political and military conflicts around the world; and
- currency exchange rates could fluctuate and adversely impact the cost advantages intended from maintaining these facilities.

There are a number of risks associated with our international operations that could have a material impact on our operations and financial condition.

We derive a significant portion of our revenues from international operations and anticipate continuing to do so. As a result, we are subject to risks of conducting international operations. One of the principal risks associated with international operations is potentially adverse movements of foreign currency exchange rates. Our exposures resulting from fluctuations in foreign currency exchange rates may change over time as our business evolves and could have an adverse impact on our financial condition, cash flows and/or results of operations. We have not entered into any derivative instruments or hedging contracts to reduce exposure to adverse foreign currency changes.

Other potential risks include difficulties associated with staffing and management, reliance on independent distributors, longer payment cycles, potentially unfavorable changes to foreign tax rules, compliance with foreign regulatory requirements, effects of a variety of foreign laws and regulations, including restrictions on access to personal information, reduced protection of intellectual property rights, variability of foreign economic conditions, governmental currency controls, difficulties in enforcing our contracts in foreign jurisdictions, and general economic and political conditions in the countries where we sell our products and services. Some of our products may contain encrypted technology, the export of which is regulated by the United States government. Changes in U.S. and other applicable export laws and regulations restricting the export of software or encryption technology could result in delays or reductions in our shipments of products internationally. There can be no assurance that we will be able to successfully address these challenges.

Global economic conditions could reduce the demand for our products and services or otherwise adversely impact our cash flows, operating results and financial condition.

For the foreseeable future, we expect to derive most of our revenue from products and services we provide to the banking and financial services industries. The global electronic payments industry and the banking and financial services industries depend heavily upon the overall levels of consumer, business and government spending. The current economic conditions and the potential for increased or continuing disruptions in these industries as well as the general software sector could result in a decrease in consumers’ use of banking services and financial service providers resulting in significant decreases in the demand for our products and services which could adversely affect our business and operating results. A lessening demand in either the overall economy, the banking and financial services industry or the software sector could also result in the implementation by banks and related financial service providers of cost reduction measures or reduced capital spending resulting in longer sales cycles, deferral or delay of purchase commitments for our products and increased price competition which could lead to a material decrease in our future revenues and earnings.

Failure to attract and retain skilled technical employees or senior management personnel could harm our ability to grow

Our future success depends upon our ability to attract and retain highly-skilled technical personnel. Because the development of our solutions and services requires knowledge of computer hardware, operating system software, system management software and application software, our technical personnel must be proficient in a number of disciplines. Competition for such technical personnel is intense, and our failure to hire and retain talented personnel could have a material adverse effect on our business, operating results and financial condition.

Our future growth will also require sales and marketing, financial and administrative personnel to develop and support new solutions and services, to enhance and support current solutions and services and to expand operational and financial systems. There can be no assurance that we will be able to attract and retain the necessary personnel to accomplish our growth strategies and we may experience constraints that could adversely affect our ability to satisfy client demand in a timely fashion.

Our ability to maintain compliance with applicable laws, rules and regulations and to manage and monitor the risks facing our business relies upon the ability to maintain skilled compliance, security, risk and audit professionals. Competition for such skillsets is intense, and our failure to hire and retain talented personnel could have an adverse effect on our internal control environment and impact our operating results.

Our senior management team has significant experience in the financial services industry and the loss of this leadership could have an adverse effect on our business, operating results and financial condition. Further, the loss of this leadership may have an adverse impact on senior management’s ability to provide effective oversight and strategic direction for all key functions within the Company, which could impact our future business, operating results and financial condition.

The volatility and disruption of the capital and credit markets and adverse changes in the global economy may negatively impact our liquidity and our ability to access financing.

While we intend to finance our operations and growth of our business with existing cash and cash flow from operations, if adverse global economic conditions persist or worsen, we could experience a decrease in cash from operations attributable to reduced demand for our products and services and as a result, we may need to borrow additional amounts under our existing credit facility or we may require additional financing for our continued operation and growth. However, due to the existing uncertainty in the capital and credit markets and the impact of the current economic conditions on our operating results, cash flows and financial conditions, the amount of available unused borrowings under our existing credit facility may be insufficient to meet our needs and/or our access to capital outside of our existing credit facility may not be available on terms acceptable to us or at all. Additionally, if one or more of the financial institutions in our syndicate were to default on its obligation to fund its commitment, the portion of the committed facility provided by such defaulting financial institution would not be available to us. There can be no assurance that alternative financing on acceptable terms would be available to replace any defaulted commitments.

We may become involved in litigation that could materially adversely affect our business financial condition, cash flows and/or results of operations.

From time to time, we are involved in litigation relating to claims arising out of our operations. Any claims, with or without merit, could be time-consuming and result in costly litigation. Failure to successfully defend against these claims could result in a material adverse effect on our business, financial condition, results of operations and/or cash flows.

We may face claims associated with the sale and transition of our Community Financial Services assets and liabilities.

On March 3, 2016, we completed the sale of our CFS related assets and liabilities to Fiserv. In connection with that sale we entered into a transaction agreement and a transition services agreement in which we undertook certain continuing obligations to effect the transition of the assets and liabilities to Fiserv. We could face claims under the transaction agreement, including based on our representations and warranties, covenants and retained liabilities. We could also face claims under the transition services agreement related to our obligations to provide transition services and assistance. Any such claim or claims could result in a material adverse effect on our business, financial condition, results of operations and cash flows.

If we engage in acquisitions, strategic partnerships or significant investments in new business, we will be exposed to risks which could materially adversely affect our business.

As part of our business strategy, we anticipate that we may acquire new products and services or enhance existing products and services through acquisitions of other companies, product lines, technologies and personnel, or through investments in, or strategic partnerships with, other companies. Any acquisition, investment or partnership, is subject to a number of risks. Such risks include the diversion of management time and resources, disruption of our ongoing business, potential overpayment for the acquired company or assets, dilution to existing stockholders if our common stock is issued in consideration for an acquisition or investment, incurring or assuming indebtedness or other liabilities in connection with an acquisition which may increase our interest expense and leverage significantly, lack of familiarity with new markets, and difficulties in supporting new product lines.

Further, even if we successfully complete acquisitions, we may encounter issues not discovered during our due diligence process, including product or service quality issues, intellectual property issues and legal contingencies, the internal control environment of the acquired entity may not be consistent with our standards and may require significant time and resources to improve and we may impair relationships with employees and customers as a result of migrating a business or product line to a new owner. We will also face challenges in integrating any acquired business. These challenges include eliminating redundant operations, facilities and systems, coordinating management and personnel, retaining key employees, customers and business partners, managing different corporate cultures, and achieving cost reductions and cross-selling opportunities. There can be no assurance that we will be able to fully integrate all aspects of acquired businesses successfully, realize synergies expected to result from the acquisition, advance our business strategy or fully realize the potential benefits of bringing the businesses together, and the process of integrating these acquisitions may further disrupt our business and divert our resources.

In addition, under business combination accounting standards pursuant to ASC 805, *Business Combinations*, we recognize the identifiable assets acquired, the liabilities assumed and any non-controlling interests in acquired companies generally at their acquisition date fair values and, in each case, separately from goodwill. Goodwill as of the acquisition date is measured as the excess amount of consideration transferred, which is also generally measured at fair value, and the net of the acquisition date amounts of the identifiable assets acquired and the liabilities assumed. Our estimates of fair value are based upon assumptions believed to be reasonable but which are inherently uncertain. After we complete an acquisition, a number of factors could result in material goodwill impairment charges that could adversely affect our operating results.

Our failure to successfully manage acquisitions or investments, or successfully integrate acquisitions could have a material adverse effect on our business, financial condition, cash flows and/or results of operations. Correspondingly, our expectations related to the benefits related to our recent acquisitions, prior acquisitions or any other future acquisition or investment could be inaccurate.

Our balance sheet includes significant amounts of goodwill and intangible assets. The impairment of a significant portion of these assets could negatively affect our financial results.

Our balance sheet includes goodwill and intangible assets that represent a significant portion of our total assets at December 31, 2017. On at least an annual basis, we assess whether there have been impairments in the carrying value of goodwill and intangible assets. If the carrying value of the asset is determined to be impaired, then it is written down to fair value by a charge to operating earnings. An impairment of a significant portion of goodwill or intangible assets could materially negatively affect our results of operations.

Our current credit facility contains restrictions and other financial covenants that limit our flexibility in operating our business.

Our credit facility contains customary affirmative and negative covenants for credit facilities of this type that limit our ability to engage in specified types of transactions. These covenants limit our ability, and the ability of our subsidiaries, to, among other things: pay dividends on, repurchase or make distributions in respect of our capital stock or make other restricted payments; make certain investments; sell certain assets; create liens; incur additional indebtedness or issue certain preferred shares; consolidate, merge, sell or otherwise dispose of all or substantially all of our assets; and enter into certain transactions with our affiliates. Our credit facility also requires us to meet certain quarterly financial tests, including a maximum leverage ratio and a minimum interest coverage ratio. Our credit facility includes customary events of default, including, but not limited to, failure to pay principal or interest, breach of covenants or representations and warranties, cross-default to other indebtedness, judgment default and insolvency. If an event of default occurs under the credit facility, the lenders will be entitled to take various actions, including, but not limited to, demanding payment for all amounts outstanding. If adverse global economic conditions persist or worsen, we could experience decreased revenues from our operations attributable to reduced demand for our products and services and as a result, we could fail to satisfy the financial and other restrictive covenants to which we are subject under our existing credit facility, resulting in an event of default. If we are unable to cure the default or obtain a waiver, we will not be able to access our credit facility and there can be no assurance that we would be able to obtain alternative financing.

Our existing levels of debt and debt service requirements may adversely affect our financial condition or operational flexibility and prevent us from fulfilling our obligations under our outstanding indebtedness.

Our level of debt could have adverse consequences for our business, financial condition, operating results and operational flexibility, including the following: (i) the debt level may cause us to have difficulty borrowing money in the future for working capital, capital expenditures, acquisitions or other purposes; (ii) our debt level may limit operational flexibility and our ability to pursue business opportunities and implement certain business strategies; (iii) we use a large portion of our operating cash flow to pay principal and interest on our credit facility, which reduces the amount of money available to finance operations, acquisitions and other business activities; (iv) we have a higher level of debt than some of our competitors or potential competitors, which may cause a competitive disadvantage and may reduce flexibility in responding to changing business and economic conditions, including increased competition and vulnerability to general adverse economic and industry conditions; (v) our debt has a variable rate of interest, which exposes us to the risk of increased interest rates; (vi) there are significant maturities on our debt that we may not be able to fulfill or that may be refinanced at higher rates; and (vii) if we fail to satisfy our obligations under our outstanding debt or fail to comply with the financial or other restrictive covenants required under our credit facility, an event of default could result that would cause all of our debt to become due and payable and could permit the lenders under our credit facility to foreclose on the assets securing such debt.

Management's backlog estimate may not be accurate and may not generate the predicted revenues.

Estimates of future financial results are inherently unreliable. Our backlog estimates require substantial judgment and are based on a number of assumptions, including management's current assessment of customer and third party contracts that exist as of the date the estimates are made, as well as revenues from assumed contract renewals, to the extent that we believe that recognition of the related revenue will occur within the corresponding backlog period. A number of factors could result in actual revenues being less than the amounts reflected in backlog. Our customers or third party partners may attempt to renegotiate or terminate their contracts for a number of reasons, including mergers, changes in their financial condition, or general changes in economic conditions within their industries or geographic locations, or we may experience delays in the development or delivery of products or services specified in customer contracts. Actual renewal rates and amounts may differ from historical experiences used to estimate backlog amounts. Changes in foreign currency exchange rates may also impact the amount of revenue actually recognized in future periods. Accordingly, there can be no assurance that contracts included in backlog will actually generate the specified revenues or that the actual revenues will be generated within a 12-month or 60-month period. Additionally, because backlog estimates are operating metrics, the estimates are not required to be subject to the same level of internal review or controls as a generally accepted accounting principles ("GAAP") financial measure.

We may face exposure to unknown tax liabilities, which could adversely affect our financial condition, cash flows and/or results of operations.

We are subject to income and non-income based taxes in the United States and in various foreign jurisdictions. Significant judgment is required in determining our worldwide income tax liabilities and other tax liabilities. In addition, we expect to continue to benefit from implemented tax-saving strategies. We believe that these tax-saving strategies comply with applicable tax law. If the governing tax authorities have a different interpretation of the applicable law and successfully challenge any of our tax positions, our financial condition, cash flows and/or results of operations could be adversely affected.

Our U.S. companies are the subject of an examination by several state tax departments. Some of our foreign subsidiaries are currently the subject of a tax examination by the local taxing authorities. Other foreign subsidiaries could face challenges from various foreign tax authorities. It is not certain that the local authorities will accept our tax positions. We believe our tax positions comply with applicable tax law and intend to vigorously defend our positions. However, differing positions on certain issues could be upheld by foreign tax authorities, which could adversely affect our financial condition and/or results of operations.

Our revenue and earnings are highly cyclical, our quarterly results fluctuate significantly and we have revenue-generating transactions concentrated in the final weeks of a quarter which may prevent accurate forecasting of our financial results and cause our stock price to decline.

Our revenue and earnings are highly cyclical causing significant quarterly fluctuations in our financial results. Revenue and operating results are usually strongest during the third and fourth fiscal quarters ending September 30 and December 31 primarily due to the sales and budgetary cycles of our customers. We experience lower revenues, and possible operating losses, in the first and second quarters ending March 31 and June 30. Our financial results may also fluctuate from quarter to quarter and year to year due to a variety of factors, including changes in product sales mix that affect average selling prices; and the timing of customer renewals (any of which may impact the pattern of revenue recognition).

In addition, large portions of our customer contracts are consummated in the final weeks of each quarter. Before these contracts are consummated, we create and rely on forecasted revenues for planning, modeling and earnings guidance. Forecasts, however, are only estimates and actual results may vary for a particular quarter or longer periods of time. Consequently, significant discrepancies between actual and forecasted results could limit our ability to plan, budget or provide accurate guidance, which could adversely affect our stock price. Any publicly-stated revenue or earnings projections are subject to this risk.

Our stock price may be volatile.

No assurance can be given that operating results will not vary from quarter to quarter, and past performance may not accurately predict future performance. Any fluctuations in quarterly operating results may result in volatility in our stock price. Our stock price may also be volatile, in part, due to external factors such as announcements by third parties or competitors, inherent volatility in the technology sector, variability in demand from our existing customers, failure to meet the expectations of market analysts, the level of our operating expenses and changing market conditions in the software industry. In addition, the financial markets have experienced significant price and volume fluctuations that have particularly affected the stock prices of many technology companies and financial services companies, and these fluctuations sometimes are unrelated to the operating performance of these companies. Broad market fluctuations, as well as industry-specific and general economic conditions may adversely affect the market price of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease office space in Naples, Florida, for our principal executive headquarters. The Naples lease expires in 2027. We also lease office space in Omaha, Nebraska, for our principal product development group, sales and support groups for the Americas, as well as our corporate, accounting, and administrative functions. The Omaha lease continues through 2028. Our EMEA headquarters is located in Watford, England. The lease for the Watford facility expires at the end of 2023. Our Asia/Pacific headquarters is located in Singapore, with the lease for this facility expiring in fiscal 2020. We also lease office space in numerous other locations in the United States and in many other countries.

We believe that our current facilities are adequate for our present and short-term foreseeable needs and that additional suitable space will be available as required. We also believe that we will be able to renew leases as they expire or secure alternate suitable space. See Note 14, *Commitments and Contingencies*, in the Notes to Consolidated Financial Statements for additional information regarding our obligations under our facilities leases.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we are involved in various litigation matters arising in the ordinary course of our business.

On September 23, 2015, a jury verdict was returned against ACI Worldwide Corp. ("ACI Corp."), a subsidiary of the Company, for $43.8 million in connection with counterclaims brought by Baldwin Hackett & Meeks, Inc. ("BHMI") in the District Court of Douglas County, Nebraska. On September 21, 2012, ACI Corp. had sued BHMI for misappropriation of ACI Corp.'s trade secrets. The jury found that ACI Corp. had not met its burden of proof regarding these claims. On March 6, 2013, BHMI asserted counterclaims alleged to arise out of ACI Corp.'s filing of its lawsuit. On September 23, 2015, the jury found for BHMI on its counterclaims and awarded $43.8 million in damages. The court entered a judgment against ACI Corp. for $43.8 million for damages and $2.7 million for attorney fees and costs. ACI Corp. disagreed with the verdicts and judgment, and after the trial court denied ACI Corp.'s post-judgment motions ACI Corp. perfected an appeal of the dismissal of its claims against BHMI and the judgment in favor of BHMI. On June 9, 2017, the Nebraska Supreme Court affirmed the District Court judgment. The Company recorded expense of $48.1 million during the nine months ended September 30, 2017, of which $46.7 million is included in general and administrative expense and $1.4 million is in interest expense in the accompanying consolidated statement of operations. The Company paid the judgment, including interest, during the year-ended December 31, 2017.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock trades on The NASDAQ Global Select Market under the symbol ACIW. The following table sets forth, for the periods indicated, the high and low sale prices of our common stock as reported by The NASDAQ Global Select Market:

	Year ended December 31, 2017		Year ended December 31, 2016	
	High	**Low**	**High**	**Low**
Fourth quarter	$24.60	$22.20	$20.04	$17.01
Third quarter	$24.42	$21.26	$19.85	$17.87
Second quarter	$23.83	$20.55	$21.78	$18.54
First quarter	$22.81	$18.56	$20.79	$16.23

As of February 23, 2018, there were 292 holders of record of our common stock. A substantially greater number of holders of our common stock are "street name" or beneficial holders, whose shares are held of record by banks, brokers, and other financial institutions.

Dividends

We have never declared nor paid cash dividends on our common stock. We do not presently anticipate paying cash dividends. However, any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend upon our financial condition, capital requirements, and earnings, as well as other factors the board of directors may deem relevant. The terms of our current Credit Facility may restrict the payment of dividends subject to us meeting certain financial metrics and being in compliance with the events of default provisions of the agreement.

Issuer Purchases of Equity Securities

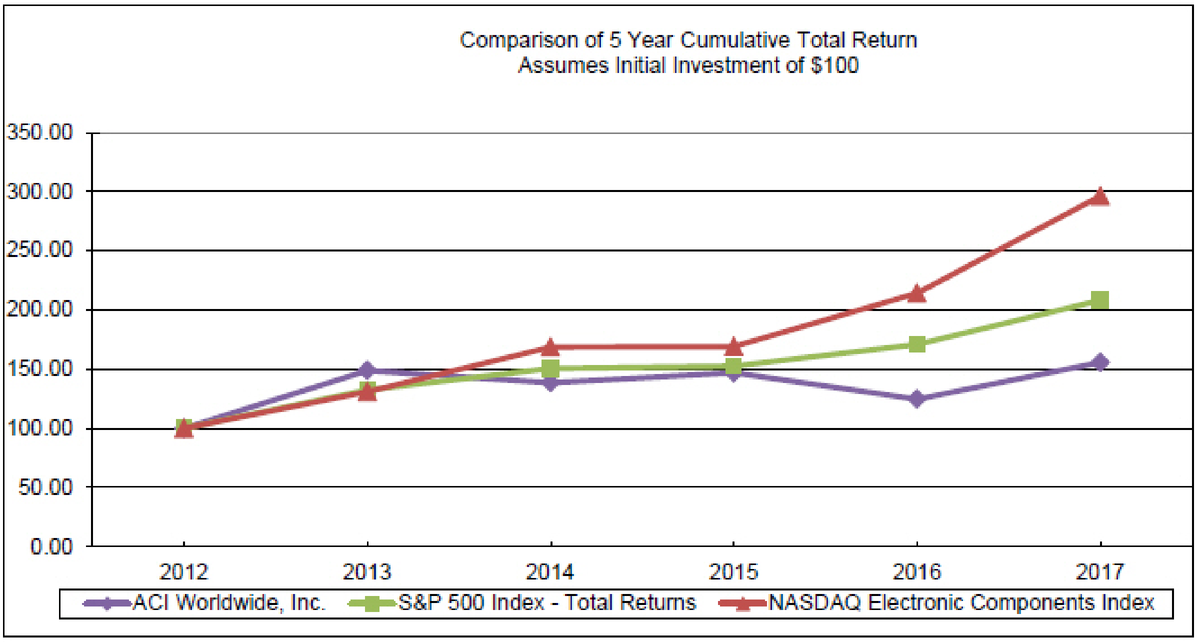
The following table provides information regarding our repurchases of common stock during the three months ended December 31, 2017:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program
October 1, 2017 through October 31, 2017	—	$ —	—	$ 78,235,000
November 1, 2017 through November 30, 2017	—	—	—	78,235,000
December 1, 2017 through December 31, 2017	1,653,573	22.61	1,653,573	40,848,000
Total	1,653,573	$ 22.61	1,653,573	

In fiscal 2005, we announced that our Board of Directors approved a stock repurchase program authorizing us, from time to time as market and business conditions warrant, to acquire up to $80.0 million of our common stock, and that we intended to use existing cash and cash equivalents to fund these repurchases. Our Board of Directors approved an increase of $30.0 million, $100.0 million, and $52.1 million to the stock repurchase program in May 2006, March 2007, and February 2012, respectively, bringing the total of the approved program to $262.1 million. On September 13, 2012, our Board of Directors approved the repurchase of up to 7,500,000 shares of our common stock, or up to $113.0 million, in place of the remaining repurchase amounts previously authorized. In July 2013 and again in February 2014, our Board of Directors approved an additional $100.0 million for stock repurchases for a total additional $200.0 million. Approximately $40.8 million remains available at December 31, 2017. There is no guarantee as to the exact number of shares that will be repurchased by us. Repurchased shares are returned to the status of authorized but unissued shares of common stock. In March 2005, our Board of Directors approved a plan under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of shares of common stock under the existing stock repurchase program. Under our Rule 10b5-1 plan, we have delegated authority over the timing and amount of repurchases to an independent broker who does not have access to inside information about the Company. Rule 10b5-1 allows us, through the independent broker, to purchase shares at times when we ordinarily would not be in the market because of self-imposed trading blackout periods, such as the time immediately preceding the end of the fiscal quarter through a period three business days following our quarterly earnings release.

Stock Performance Graph and Cumulative Total Return

The following table shows a line-graph presentation comparing cumulative stockholder return on an indexed basis with a broad equity market index and either a nationally-recognized industry standard or an index of peer companies selected by us. We selected the S&P 500 Index and the NASDAQ Electronic Components Index for comparison.



The graph above assumes that a $100 investment was made in our common stock and each index on December 31, 2012, and that all dividends were reinvested. Also included are the respective investment returns based upon the stock and index values as of the end of each year during such five-year period. The information was provided by Zacks Investment Research, Inc. of Chicago, Illinois.

The stock performance graph disclosure above is not considered “filed” with the SEC under the Securities and Exchange Act of 1934, as amended, and is not incorporated by reference in any past or future filing by us under the Securities Exchange Act of 1934, as amended, or the Securities Act of 1933, as amended, unless specifically referenced.

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data has been derived from our consolidated financial statements. This data should be read together with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations", and the consolidated financial statements and related notes included elsewhere in this Annual Report. The financial information below is not necessarily indicative of the results of future operations. Future results could differ materially from historical results due to many factors, including those discussed in Item 1A in the section entitled "Risk Factors."

	Years Ended December 31,				
	2017	2016 (2)	2015 (3)	2014 (4)	2013 (5)
	(in thousands, except per share data)				
Income Statement Data:					
Total revenues	$1,024,191	$1,005,701	$1,045,977	$1,016,149	$ 864,928
Net income (1)	$ 5,135	$ 129,535	$ 85,436	$ 67,560	$ 63,868
Earnings per share:					
Basic	$ 0.04	$ 1.10	$ 0.73	$ 0.59	$ 0.54
Diluted	$ 0.04	$ 1.09	$ 0.72	$ 0.58	$ 0.53
Shares used in computing earnings per share:					
Basic	118,059	117,533	117,465	114,798	117,885
Diluted	119,444	118,847	118,919	116,771	120,054

	As of December 31,				
	2017	2016 (2)	2015 (3)	2014 (4)	2013 (5)
Balance Sheet Data:					
Working capital	$ 100,039	$ 31,625	$ (2,360)	$ (4,672)	$ 43,922
Total assets	1,861,639	1,902,295	1,975,788	1,830,172	1,659,948
Current portion of debt (6)	17,786	90,323	89,710	81,108	42,037
Debt (long-term portion) (6)(7)	668,356	656,063	845,639	795,194	700,136
Stockholders' equity	764,597	754,917	654,400	581,405	543,694

(1) The consolidated statement of operations for the year-ended December 31, 2017 reflects the BHMI judgment matter as discussed in Note 14, *Commitments and Contingencies*, in the Notes to Consolidated Financial Statements.

(2) The consolidated balance sheet and statement of operations for the year-ended December 31, 2016 reflects the sale of CFS assets and liabilities as discussed in Note 3, *Divestiture*, in the Notes to Consolidated Financial Statements.

(3) The consolidated balance sheet and statement of operations for the year-ended December 31, 2015 includes the acquisition of PAY.ON as discussed in Note 2, *Acquisitions*, in the Notes to Consolidated Financial Statements.

(4) The consolidated balance sheet and statement of operations for the year-ended December 31, 2014 includes the acquisition of Retail Decisions Europe Limited and Retail Decisions, Inc. (collectively "ReD").

(5) The consolidated balance sheet and statement of operations for the year-ended December 31, 2013 includes the acquisitions of Official Payments Holdings, Inc. ("OPAY") and all its subsidiaries, Online Resources Corporation ("ORCC") and all its subsidiaries, and Profesionales en Transacciones Electronicas S.A. – Venezuela ("PTESA-V"), 100% of Profesionales en Transacciones Electronicas S.A. – Ecuador ("PTESA-E"), and the ACI related assets of Profesionales en Transacciones Electronicas S.A. – Colombia ("PTESA-C"), collectively "PTESA".

(6) During the year-ended December 31, 2015, we increased the Revolving Credit Facility by $181.0 million to fund the acquisition of PAY.ON and related transaction expenses. During the year-ended December 31, 2014, we increased the Term Credit Facility by $150.0 million to fund the acquisition of ReD. In addition, we drew a net additional $44.0 million on our Revolving Credit Facility during the year-ended December 31, 2014 partially used to fund the acquisition of ReD and the related transaction costs. During the year-ended December 31, 2013, we increased the Term Credit Facility by $300.0 million to fund the acquisition of ORCC and amended our Credit Agreement to extend the term to 2018. We also added $300.0 million in Senior Notes during the year-ended December 31, 2013, all of which is due in August 2020. See Note 5, *Debt*, in the Notes to Consolidated Financial Statements for further discussion.

(7) During the year-ended December 31, 2012, the Company financed a five-year license agreement for certain internally-used software for $14.8 million with annual payments through April 2016. During the year-ended December 31, 2015, we financed multiple three-year license agreements for certain internally-used software for a total value of $20.4 million with payments due through November 2018. Of these amounts at December 31, 2016, $9.0 million remained outstanding with $7.3 million included in other current liabilities and $1.7 million included in other non-current liabilities in our consolidated balance sheet. At December 31, 2017, $1.9 million remained outstanding with $1.5 million included in other current liabilities and $0.4 million included in other non-current liabilities in our consolidated balance sheet.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

ACI Worldwide, the Universal Payments ("UP") company, powers electronic payments for more than 5,100 organizations around the world. More than 1,000 of the largest banks and financial intermediaries, as well as thousands of global merchants, rely on ACI to execute $14 trillion each day in payments and securities. In addition, thousands of organizations utilize our EBPP services. Through our comprehensive suite of SaaS and Platform solutions, we deliver real-time, immediate payments capabilities, and enable a complete omni-channel payments experience.

Our products are sold and supported through distribution networks covering three geographic regions – the Americas, EMEA, and Asia/Pacific. Each distribution network has its own globally coordinated sales force and supplements its sales force with independent reseller and/or distributor networks. These products and solutions are used globally by banks, financial intermediaries, merchants, and corporates, such as third-party electronic payment processors, payment associations, switch interchanges and a wide range of transaction-generating endpoints, including ATMs, merchant point-of-sale ("POS") terminals, bank branches, mobile phones, tablets, corporations, and Internet commerce sites. Accordingly, our business and operating results are influenced by trends such as information technology spending levels, the growth rate of the electronic payments industry, mandated regulatory changes, and changes in the number and type of customers in the financial services industry. Our products are marketed under the ACI Worldwide, ACI Universal Payment, and ACI UP brands.

We derive a majority of our revenues from domestic operations and believe we have large opportunities for growth in international markets as well as continued expansion domestically in the United States. Refining our global infrastructure is a critical component of driving our growth. We have launched a globalization strategy which includes elements intended to streamline our supply chain and maximize expertise in several geographic locations to support a growing international customer base and competitive needs. We utilize our Irish subsidiaries to manage certain of our intellectual property rights and to oversee and manage certain international product development and commercialization efforts. We increased our SaaS and Platform capabilities with a data center in Ireland allowing our SaaS and Platform solutions to be more-broadly offered in the European market. We also continue to grow centers of expertise in Timisoara, Romania and Pune and Bangalore in India, as well as key operational centers such as Cape Town, South Africa and in multiple locations in the United States.

Key trends that currently impact our strategies and operations include:

Increasing electronic payment transaction volumes. Electronic payment volumes continue to increase around the world, taking market share from traditional cash and check transactions. The Boston Consulting Group predicts that electronic payment transactions will grow in volume at an annual rate of 6.7%, from 481 billion in 2016 to 624.6 billion in 2020, with varying growth rates based on the type of payment and part of the world. We leverage the growth in transaction volumes through the licensing of new systems to customers whose older systems cannot handle increased volume and through the licensing of capacity upgrades to existing customers.

Adoption of real-time payments. Customer expectations, from both consumers and corporate, are driving the payments world to more real-time delivery. In the U.K., payments sent through the traditional ACH multi-day batch service can now be sent through the Faster Payments service giving almost immediate access to the funds, and this is being considered and implemented in several countries including Australia and the United States. In the U.S. market, NACHA implemented phase 2 of Same Day ACH in September 2017. Corporate customers expect real-time information on the status of their payments instead of waiting for an end of-day report. Regulators expect banks to be monitoring key measures like liquidity in real time. ACI's focus has always been on the real-time execution of transactions and delivery of information through real-time tools, such as dashboards, so our experience will be valuable in addressing this trend.

Increasing competition. The electronic payments market is highly competitive and subject to rapid change. Our competition comes from in-house information technology departments, third-party electronic payment processors, and third-party software companies located both within and outside of the United States. Many of these companies are significantly larger than us and have significantly greater financial, technical, and marketing resources. As electronic payment transaction volumes increase, third-party processors tend to provide competition to our solutions, particularly among customers that do not seek to differentiate their electronic payment offerings or are eliminating banks from the payments service, reducing the need for our solutions. As consolidation in the financial services industry continues, we anticipate that competition for those customers will intensify.

Adoption of cloud technology. In an effort to leverage lower-cost computing technologies, some banks, financial intermediaries, merchants, and corporates are seeking to transition their systems to make use of cloud technology. Our investments provide us the grounding to deliver cloud capabilities in the future. Market sizing data from Ovum indicates that spend on SaaS and Platform payment systems is growing faster than spend on installed applications.

Electronic payments fraud and compliance. As electronic payment transaction volumes increase, organized criminal organizations continue to find ways to commit a growing volume of fraudulent transactions using a wide range of techniques. Banks, financial intermediaries, merchants and corporates continue to seek ways to leverage new technologies to identify and prevent fraudulent transactions and other attacks such as denial of service attacks. Due to concerns with international terrorism and money laundering, banks and financial intermediaries in particular are being faced with increasing scrutiny and regulatory pressures. We continue to see opportunity to offer our fraud detection solutions to help customers manage the growing levels of electronic payments fraud and compliance activity.

Adoption of smartcard technology. In many markets, card issuers are being required to issue new cards with embedded chip technology, with the liability shift having gone into effect in 2015 in the United States. Chip-based cards are more secure, harder to copy, and offer the opportunity for multiple functions on one card (e.g., debit, credit, electronic purse, identification, health records, etc.). This results in greater card-not-present fraud (e.g., fraud at eCommerce sites).

Single Euro Payments Area (SEPA). The SEPA, primarily focused on the European economic community and the U.K., is designed to facilitate lower costs for cross-border payments and reduce timeframes for settling electronic payment transactions. The transition to SEPA payment mechanisms will drive more volume to these systems with the potential to cause banks to review the capabilities of the systems supporting these payments. Our Retail Payments and Real-Time Payments solutions facilitate key functions that help banks and financial intermediaries address these mandated regulations.

European Payment Service Directive (PSD2). PSD2, which was ratified by the European Parliament in 2015, will force member states to implement new payments regulation by 2018. The XS2A provision effectively creates a new market opportunity where banks in European Union member countries must provide open API standards to customer data, thus allowing authorized third-party providers to enter the market.

Financial institution consolidation. Consolidation continues on a national and international basis, as financial institutions seek to add market share and increase overall efficiency. Such consolidations have increased, and may continue to increase, in their number, size, and market impact as a result of recent economic conditions affecting the banking and financial industries. There are several potential negative effects of increased consolidation activity. Continuing consolidation of financial institutions may result in a smaller number of existing and potential customers for our products and services. Consolidation of two of our customers could result in reduced revenues if the combined entity were to negotiate greater volume discounts or discontinue use of certain of our products. Additionally, if a non-customer and a customer combine and the combined entity decides to forego future use of our products, our revenue would decline. Conversely, we could benefit from the combination of a non-customer and a customer when the combined entity continues use of our products and, as a larger combined entity, increases its demand for our products and services. We tend to focus on larger financial institutions as customers, often resulting in our solutions being the solutions that survive in the consolidated entity.

Global vendor sourcing. Global and regional banks, financial intermediaries, merchants, and corporates are aiming to reduce the costs in supplier management by picking suppliers who can service them across all their geographies instead of allowing each country operation to choose suppliers independently. Our global footprint from both a customer and a delivery perspective enable us to be successful in this global sourced market. However, projects in these environments tend to be more complex and therefore of higher risk.

Electronic payments convergence. As electronic payment volumes grow and pressures to lower overall cost per transaction increase, banks and financial intermediaries are seeking methods to consolidate their payments processing across the enterprise. We believe that the strategy of using service-oriented architectures to allow for re-use of common electronic payment functions, such as authentication, authorization, routing and settlement, will become more common. Using these techniques, banks and financial intermediaries will be able to reduce costs, increase overall service levels, enable one-to-one marketing in multiple bank channels, leverage volumes for improved pricing and liquidity, and manage enterprise risk. Our product strategy is, in part, focused on this trend, by creating integrated payment functions that can be re-used by multiple bank channels, across both the consumer and wholesale bank. While this trend presents an opportunity for us, it may also expand the competition from third-party electronic payment technology and service providers specializing in other forms of electronic payments. Many of these providers are larger than us and have significantly greater financial, technical and marketing resources.

Mobile banking and payments. There is a growing demand for the ability to carry out banking services or make payments using a mobile phone. Recent statistics from Javelin Strategy & Research, a subsidiary of Greenwich Associates, show that 50% of adults in the United States use their phone for mobile banking. The use of phones for mobile banking is expected to grow to 81% in 2020. Our customers have been making use of existing products to deploy mobile banking, mobile payments, and mobile commerce solutions for their customers in many countries. In addition, ACI has invested in mobile products of our own and via partnerships to support mobile functionality in the marketplace.

Electronic bill payment and presentment. EBPP encompasses all facets of bill payment, including biller direct, where customers initiate payments on biller websites, the consolidator model, where customers initiate payments on a financial institution's website, and walk-in bill payment, as one might find in a convenience store. The EBPP market continues to grow as consumers move away from traditional forms of paper-based payments. According to Aite Group, the percentage of online payments made on biller sites grew from 62% in 2010 to 73% in 2016. The biller-direct solutions are seeing strong growth as billers migrate these services to outsourcers, such as ACI, from legacy systems built in house. We believe that EBPP remains ripe for outsourcing, as a significant amount of biller-direct transactions are still processed in house. As billers seek to manage costs and improve efficiency, we believe that they will continue to look to third-party EBPP vendors that can offer a complete solution for their billing needs.

The banking, financial services, and payment industries have come under increased scrutiny from federal, state, and foreign lawmakers and regulators in response to the crises in the financial markets and the global recession. In particular, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), which was signed into law July 21, 2010, represents a comprehensive overhaul of the U.S. financial services industry and requires the implementation of many regulations that have a direct impact on our customers and potential customers. This is not limited to the United States. In April 2014, the European Commission voted to adopt a number of amendments with regards to the Payment Services Directive, placing further pressure on industry incumbents.

These regulatory changes may create both opportunities and challenges for us. The application of the new regulations on our customers could create an opportunity for us to market our product capabilities and the flexibility of our solutions to assist our customers in addressing these regulations. At the same time, these regulatory changes may have an adverse impact on our operations and our financial results as we adjust our activities in light of increased compliance costs and customer requirements. It is currently too difficult to predict the long-term extent to which the Dodd-Frank Act, Payment Services Directive or the resulting regulations will impact our business and the businesses of our current and potential customers.

Several other factors related to our business may have a significant impact on our operating results from year to year. For example, the accounting rules governing the timing of revenue recognition in the software industry are complex and it can be difficult to estimate when we will recognize revenue generated by a given transaction. Factors such as maturity of the software product licensed, payment terms, creditworthiness of the customer, and timing of delivery or acceptance of our products often cause revenues related to sales generated in one period to be deferred and recognized in later periods. For arrangements in which services revenue is deferred, related direct and incremental costs may also be deferred. Additionally, while the majority of our contracts are denominated in the U.S. dollar, a substantial portion of our sales are made, and some of our expenses are incurred, in the local currency of countries other than the United States. Fluctuations in currency exchange rates in a given period may result in the recognition of gains or losses for that period.
We continue to seek ways to grow through organic sources, partnerships, alliances, and acquisitions. We continually look for potential acquisitions designed to improve our solutions' breadth or provide access to new markets. As part of our acquisition strategy, we seek acquisition candidates that are strategic, capable of being integrated into our operating environment and financially accretive to our financial performance.

Divestiture

Community Financial Services

On March 3, 2016, we completed the sale of our CFS related assets and liabilities to Fiserv for $200.0 million. The sale of CFS, which was not strategic to our long-term strategy, is part of the Company's ongoing efforts to expand as a provider of software products and SaaS-based and Platform-based solutions facilitating real-time electronic and eCommerce payments for large banks, financial intermediaries, merchants, and corporates worldwide. The sale included employee agreements and customer contracts as well as technology assets and intellectual property.

For the year-ended December 31, 2016, we recognized a net after-tax gain of $93.4 million on sale of assets to Fiserv.

Backlog

Included in backlog estimates are all software license fees, maintenance fees and services fees (including SaaS and Platform) specified in executed contracts, as well as revenues from assumed contract renewals to the extent that we believe recognition of the related revenue will occur within the corresponding backlog period. We have historically included assumed renewals in backlog estimates based upon automatic renewal provisions in the executed contract and our historic experience with customer renewal rates.

Our 60-month backlog estimate represents expected revenues from existing customers using the following key assumptions:

- Maintenance fees are assumed to exist for the duration of the license term for those contracts in which the committed maintenance term is less than the committed license term.
- License, facilities management, and SaaS and Platform arrangements are assumed to renew at the end of their committed term at a rate consistent with our historical experiences.
- Non-recurring license arrangements are assumed to renew as recurring revenue streams.
- Foreign currency exchange rates are assumed to remain constant over the 60-month backlog period for those contracts stated in currencies other than the U.S. dollar.
- Our pricing policies and practices are assumed to remain constant over the 60-month backlog period.

In computing our 60-month backlog estimate, the following items are specifically not taken into account:

- Anticipated increases in transaction, account, or processing volumes in customer systems.
- Optional annual uplifts or inflationary increases in recurring fees.
- Services engagements, other than facilities management and SaaS and Platform engagements, are not assumed to renew over the 60-month backlog period.
- The potential impact of merger activity within our markets and/or customers.

We review our customer renewal experience on an annual basis. The impact of this review and subsequent update may result in a revision to the renewal assumptions used in computing the 60-month and 12-month backlog estimates. In the event a revision to renewal assumptions is determined to be necessary, prior periods will be adjusted for comparability purposes.

The following table sets forth our 60-month backlog estimate, by reportable segment, as of December 31, 2017, September 30, 2017, June 30, 2017, March 31, 2017, and December 31, 2016 (in millions). Dollar amounts reflect foreign currency exchange rates as of each period end.

	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017	December 31, 2016
ACI On Premise	$ 1,700	$ 1,707	$1,722	$ 1,709	$ 1,718
ACI On Demand	2,404	2,368	2,345	2,303	2,298
Total	$ 4,104	$ 4,075	$4,067	$ 4,012	$ 4,016

	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017	December 31, 2016
Committed	$ 2,062	$ 1,908	$1,908	$ 1,914	$ 1,930
Renewal	2,042	2,167	2,159	2,098	2,086
Total	$ 4,104	$ 4,075	$4,067	$ 4,012	$ 4,016

Included in our 60-month backlog estimates are amounts expected to be recognized during the initial license term of customer contracts (“Committed Backlog”) and amounts expected to be recognized from assumed renewals of existing customer contracts (“Renewal Backlog”). Amounts expected to be recognized from assumed contract renewals are based on our historical renewal experience.

We also estimate 12-month backlog, segregated between monthly recurring and non-recurring revenues, using a methodology consistent with the 60-month backlog estimate. Monthly recurring revenues include all monthly license fees, maintenance fees and SaaS and Platform processing services fees. Non-recurring revenues include other software license fees and services fees. Amounts included in our 12-month backlog estimate assume renewal of one-time license fees on a monthly fee basis if such renewal is expected to occur in the next 12 months. The following table sets forth our 12-month backlog estimate, by segment, as of December 31, 2017 and 2016 (in millions). For all periods reported, approximately 75% of our 12-month backlog estimate is committed backlog and approximately 25% of our 12-month backlog estimate is renewal backlog. Dollar amounts reflect currency exchange rates as of each period end.

	December 31, 2017			December 31, 2016		
	Monthly Recurring	Non-Recurring	Total	Monthly Recurring	Non-Recurring	Total
ACI On Premise	$ 294	$ 72	$366	$ 298	$ 79	$377
ACI On Demand	459	—	459	439	—	439
Total	$ 753	$ 72	$825	$ 737	$ 79	$816

Estimates of future financial results require substantial judgment and are based on a number of assumptions as described above. These assumptions may turn out to be inaccurate or wrong, including for reasons outside of management's control. For example, our customers may attempt to renegotiate or terminate their contracts for a number of reasons, including mergers, changes in their financial condition, or general changes in economic conditions in the customer's industry or geographic location, or we may experience delays in the development or delivery of products or services specified in customer contracts which may cause the actual renewal rates and amounts to differ from historical experience. Changes in foreign currency exchange rates may also impact the amount of revenue actually recognized in future periods. Accordingly, there can be no assurance that amounts included in backlog estimates will actually generate the specified revenues or that the actual revenues will be generated within the corresponding 12-month or 60-month period. Additionally, because backlog estimates are operating metrics, the estimates are not required to be subject to the same level of internal review or controls as a U.S. GAAP financial measure.

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RESULTS OF OPERATIONS

The following tables present the consolidated statements of operations as well as the percentage relationship to total revenues of items included in our Consolidated Statements of Operations (amounts in thousands):

Year-ended December 31, 2017 Compared to Year-ended December 31, 2016

	2017				2016	
	Amount	% of Total Revenue	$ Change vs 2016	% Change vs 2016	Amount	% of Total Revenue
Revenues:						
Software as a service and platform as a service	$ 425,572	42%	$ 14,283	3%	$ 411,289	41%
Initial license fees (ILFs)	215,002	21%	11,846	6%	203,156	20%
Monthly license fees (MLFs)	78,122	8%	7,812	11%	70,310	7%
License	293,124	29%	19,658	7%	273,466	27%
Maintenance	222,071	22%	(11,405)	-5%	233,476	23%
Services	83,424	8%	(4,046)	-5%	87,470	9%
Total revenues	1,024,191	100%	18,490	2%	1,005,701	100%
Operating expenses:						
Cost of revenue	452,286	44%	7,372	2%	444,914	44%
Research and development	136,921	13%	(32,979)	-19%	169,900	17%
Selling and marketing	107,885	11%	(10,197)	-9%	118,082	12%
General and administrative	153,032	15%	39,415	35%	113,617	11%
Gain on sale of CFS assets	—	0%	151,463	100%	(151,463)	-15%
Depreciation and amortization	89,427	9%	(94)	0%	89,521	9%
Total operating expenses	939,551	92%	154,980	20%	784,571	78%
Operating income	84,640	8%	(136,490)	-62%	221,130	22%
Other income (expense):						
Interest expense	(39,013)	-4%	1,171	-3%	(40,184)	-4%
Interest income	564	0%	34	6%	530	0%
Other, net	(2,619)	0%	(6,724)	-164%	4,105	0%
Total other income (expense)	(41,068)	-4%	(5,519)	16%	(35,549)	-4%
Income before income taxes	43,572	4%	(142,009)	-77%	185,581	18%
Income tax expense	38,437	4%	(17,609)	-31%	56,046	6%
Net income	$ 5,135	1%	$(124,400)	-96%	$ 129,535	13%

Revenues

Total revenue for the year-ended December 31, 2017 increased $18.5 million, or 2%, as compared to the same period in 2016. The increase is the result of a $19.7 million, or 7%, increase in license revenue and a $14.3 million, or 3%, increase in SaaS and Platform revenue, partially offset by an $11.4 million, or 5%, decrease in maintenance revenue and a $4.1 million, or 5%, decrease in services revenue.

The CFS divestiture resulted in a $15.4 million decrease in total revenue for the year-ended December 31, 2017, as compared to the same period in 2016. Total revenue was $5.0 million higher for the year-ended December 31, 2017, compared to the same period in 2016 due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS and foreign currency, total revenue for the year-ended December 31, 2017, increased $28.9 million, or 3%, compared to the same period in 2016 primarily as a result of increases in license and SaaS and Platform revenue partially offset by decreases in maintenance and services revenue.

Software as a Service (“SaaS”) and Platform as a Service (“Platform”) Revenue

SaaS and Platform revenue includes fees earned through SaaS-based and Platform-based arrangements. All revenue from these arrangements that does not qualify for treatment as a separate unit of accounting, which includes set-up fees, implementation or customization services, and product support services, are included in SaaS and Platform revenue.

SaaS and Platform revenue increased $14.3 million, or 3%, during the year-ended December 31, 2017, as compared to the same period in 2016. The CFS divestiture resulted in a $13.5 million decrease in SaaS and Platform revenue during the year-ended December 31, 2017. The impact of foreign currencies on SaaS and Platform revenue during the year-ended December 31, 2017 was neutral. Excluding the impact of CFS, total SaaS and Platform revenue for year-ended December 31, 2017, increased $27.8 million, or 7%, compared to the same period in 2016, which is primarily attributable to new customers adopting our SaaS and Platform-based offerings and existing customers adding new functionality or increasing transaction volumes.

License Revenue

Customers purchase the right to license ACI software for the term of their agreement which is generally 60 months. Within these agreements are specified capacity limits typically based on customer transaction volume. ACI employs measurement tools that monitor the number of transactions processed by customers and if contractually specified limits are exceeded, additional fees are charged for the overage. Capacity overages may occur at varying times throughout the term of the agreement depending on the product, the size of the customer, and the significance of customer transaction volume growth. Depending on specific circumstances, multiple overages or no overages may occur during the term of the agreement.

Initial License Revenue

Initial license revenue includes license and capacity revenues that do not recur on a monthly or quarterly basis. Included in initial license revenue are license and capacity fees that are recognizable at the inception of the agreement and license and capacity fees that are recognizable at interim points during the term of the agreement, including those that are recognizable annually due to negotiated customer payment terms.

Initial license revenue increased $11.8 million, or 6%, during the year-ended December 31, 2017, as compared to the same period in 2016. Initial license revenue was $4.5 million higher for year-ended December 31, 2017, compared to the same period in 2016 due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of foreign currency, initial license revenue for the year-ended December 31, 2017, increased $7.3 million, or 4%, compared to the same period in 2016.

The increase in initial license revenue was primarily driven by an increase in non-capacity-related license revenue of $18.5 million partially offset by a decrease in capacity-related license revenue of $11.3 million during the year-ended December 31, 2017, compared to the same period in 2016. The changes in non-capacity-related and capacity-related license revenue were attributable to the timing and relative size of license renewal arrangements that were signed and capacity events that occurred during the year-ended December 31, 2017, as compared to the same period in 2016.

Monthly License Revenue

Monthly license revenue is license and capacity revenue that is paid monthly or quarterly due to negotiated customer payment terms as well as initial license and capacity fees that are recognized as revenue ratably over an extended period.

Monthly license revenue increased $7.8 million, or 11%, during the year-ended December 31, 2017, as compared to the same period in 2016. The CFS divestiture resulted in decreased monthly license revenue of $0.4 million during the year-ended December 31, 2017. Total monthly license revenue was $0.4 million lower for the year-ended December 31, 2017, compared to the same period in 2016 due to the impact of certain foreign currencies weakening against the U.S. dollar. Excluding the impact of CFS and foreign currency, monthly license revenue for the year-ended December 31, 2017, increased $8.5 million, or 12%, compared to the same period in 2016.

The increase in monthly license revenue is primarily attributable to the timing and relative size of license renewal arrangements that were signed during the years-ended December 31, 2016 and 2017.

Maintenance Revenue

Maintenance revenue includes standard and premium maintenance and any post contract support fees received from customers for the provision of product support services.

Maintenance revenue decreased $11.4 million, or 5%, during the year-ended December 31, 2017, as compared to the same period in 2016. The CFS divestiture resulted in decreased maintenance revenue of $0.4 million during the year-ended December 31, 2017. Total maintenance revenue was $0.3 million higher for the year-ended December 31, 2017, as compared to the same period in 2016 due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS and foreign currency, total maintenance revenue for the year-ended December 31, 2017, decreased $11.3 million, or 5%, compared to the same period in 2016.

The decrease in maintenance revenue is primarily attributable to the recognition of cumulative deferred maintenance revenue for certain customer contracts due to meeting required revenue recognition criteria during the year-ended December 31, 2016 and certain customers electing to cancel premium maintenance prior to the year-ended December 31, 2017. These decreases were partially offset by maintenance revenue from sales of licensed products to new and existing customers prior to and during the year-ended December 31, 2017.

Services Revenue

Services revenue includes fees earned through implementation services, professional services, and facilities management services. Implementation services include product installations, product configurations, and custom software modifications (“CSMs”). Professional services include business consultancy, technical consultancy, on-site support services, CSMs, product education, and testing services. These services include new customer implementations as well as existing customer migrations to new products or new releases of existing products. During the period in which non-essential services revenue is being deferred, direct and incremental costs related to the performance of these services are also being deferred. During the period in which essential services revenue is being deferred, direct and indirect costs related to the performance of these services are also being deferred.

Services revenue decreased $4.1 million, or 5%, during the year-ended December 31, 2017, as compared to the same period in 2016. The CFS divestiture resulted in decreased services revenue of $1.1 million during the year-ended December 31, 2017. Total services revenue was $0.6 million higher for the year-ended December 31, 2017, as compared to the same period in 2016 due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS and foreign currency, total services revenue for the year-ended December 31, 2017, decreased $3.5 million, or 4%, compared to the same period in 2016.

During the year-ended December 31, 2016, we completed or neared completion of several large, complex projects that resulted in recognition of services revenue as the work was performed and the projects were completed. The number and magnitude of such projects was lower during the year-ended December 31, 2017. Additionally, our customers continue to transition from on-premise to on-demand software solutions. Services work performed in relation to our on-demand software solutions is recognized over a longer service period and is classified as SaaS and Platform revenue.

Operating Expenses

Total operating expenses during the year-ended December 31, 2017 increased $3.5 million as compared to the same period in 2016, excluding the gain on sale of CFS assets.

The CFS divestiture resulted in a $15.2 million decrease in total operating expenses for the year-ended December 31, 2017 compared to the same period in 2016. In the year-ended December 31, 2017, there was $46.7 million of expense recorded in relation to the BHMI judgment. Total operating expenses were $2.1 million higher for the year-ended December 31, 2017, compared to the same period in 2016, due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS, the BHMI judgment, and foreign currency, operating expenses decreased $30.1 million, or 3%, for the year-ended December 31, 2017, compared to the same period in 2016, principally reflecting decreases in research and development expense and selling and marketing expense, partially offset by an increase in cost of revenue, general and administrative expense, and depreciation and amortization expense.

Cost of Revenue

Cost of revenue includes costs to provide SaaS and Platform services, third-party royalties, amortization of purchased and developed software for resale, the costs of maintaining our software products, as well as the costs required to deliver, install, and support software at customer sites. SaaS and Platform service costs include payment card interchange fees, assessments payable to banks, and payment card processing fees. Maintenance costs include the efforts associated with providing the customer with upgrades, 24-hour help desk, post go-live (remote) support, and production-type support for software that was previously installed at a customer location. Service costs include human resource costs and other incidental costs such as travel and training required for both pre go-live and post go-live support. Such efforts include project management, delivery, product customization and implementation, installation support, consulting, configuration, and on-site support.

Cost of revenue increased $7.4 million, or 2%, during the year-ended December 31, 2017, compared to the same period in 2016. The CFS divestiture resulted in a decrease of $10.4 million in cost of revenue for the year-ended December 31, 2017. Cost of revenue was approximately $0.2 million higher due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS and foreign currency, cost of revenue increased $17.6 million, or 4%, for the year-ended December 31, 2017, compared to the same period in 2016, primarily due to a $19.8 million increase in payment card interchange fees.

Research and Development

Research and development (“R&D”) expenses are primarily human resource costs related to the creation of new products, improvements made to existing products as well as compatibility with new operating system releases and generations of hardware.

Research and development expense decreased $33.0 million, or 19%, during the year-ended December 31, 2017, as compared to the same period in 2016. The CFS divestiture resulted in a decrease of $1.6 million in research and development expense for the year-ended December 31, 2017. Research and development expenses were $1.0 million higher for the year-ended December 31, 2017, compared to the same period in 2016, due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS and foreign currency, research and development expenses decreased $32.4 million, or 19%, for the year-ended December 31, 2017, compared to the same period in 2016, primarily due to a decrease in personnel and related expenses, including a $12.3 million decrease in stock-based compensation. Research and development costs were also lower due to a $4.1 million increase in net deferred expenses and a $2.5 million decrease in third party contractor costs.

Selling and Marketing

Selling and marketing includes both the costs related to selling our products to current and prospective customers as well as the costs related to promoting the Company, its products and the research efforts required to measure customers' future needs and satisfaction levels. Selling costs are primarily the human resource and travel costs related to the effort expended to license our products and services to current and potential clients within defined territories and/or industries as well as the management of the overall relationship with customer accounts. Selling costs also include the costs associated with assisting distributors in their efforts to sell our products and services in their respective local markets. Marketing costs include costs needed to promote the Company and its products as well as perform or acquire market research to help us better understand what products our customers are looking for in the future. Marketing costs also include the costs associated with measuring customers' opinions toward the Company, our products and personnel.

Selling and marketing expense decreased $10.2 million, or 9%, during the year-ended December 31, 2017, as compared to the same period in 2016. The CFS divestiture resulted in a decrease of $1.6 million in selling and marketing expense for the year-ended December 31, 2017. Selling and marketing expense was $0.1 million higher for the year-ended December 31, 2017, as compared to the same period in 2016, due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS and foreign currency, selling and marketing expense decreased $8.7 million, or 7%, for the year-ended December 31, 2017, compared to the same period in 2016, primarily due to a decrease in personnel and related expenses as a result of a decrease in new bookings and a $4.0 million decrease in stock-based compensation expense.

General and Administrative

General and administrative expenses are primarily human resource costs including executive salaries and benefits, personnel administration costs, and the costs of corporate support functions such as legal, administrative, human resources, and finance and accounting.

General and administrative expense increased $39.4 million, or 35%, during the year-ended December 31, 2017, as compared to the same period in 2016. For the year-ended December 31, 2017, $46.7 million of expense was recorded in relation to the BHMI judgment. The CFS divestiture resulted in a decrease in general and administrative expenses of $1.0 million for the year-ended December 31, 2017. General and administrative expense was approximately $0.6 million higher for the year-ended December 31, 2017, as compared to the same period in 2016, due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS, the BHMI judgment, and foreign currency, general and administrative expense decreased $6.9 million, or 6%, for the year-ended December 31, 2017, compared to the same period in 2016.

Gain on Sale of CFS Assets

On March 3, 2016, we completed the sale of our CFS related assets and liabilities to Fiserv for $200.0 million and recognized a pre-tax gain of $151.5 million for the year-ended December 31, 2016.

Depreciation and Amortization

Depreciation and amortization decreased $0.1 million during the year-ended December 31, 2017, as compared to the same period in 2016. The CFS divestiture resulted in a $0.6 million decrease in depreciation and amortization for the year-ended December 31, 2017. Depreciation and amortization expense were approximately $0.2 million higher for the year-ended December 31, 2017, as compared to the same period in 2016, due to the impact of foreign currencies strengthening against the U.S. dollar. Excluding the impact of CFS and foreign currency, depreciation and amortization expense increased $0.3 million for the year-ended December 31, 2017, compared to the same period in 2016.

Other Income and Expense

Interest expense for the year-ended December 31, 2017 decreased $1.2 million, or 3%, as compared to the same period in 2016 primarily due to lower comparative debt balances. Interest income was flat year over year.

Other, net consists of foreign currency gain (loss). Foreign currency gain (loss) for the years ended December 31, 2017 and 2016 were a $2.6 million loss and a $4.1 million gain, respectively.

Income Taxes

On December 22, 2017, the Tax Cuts and Jobs Act (“Tax Act”) was signed into U.S. law. The Tax Act makes broad and complex changes to the U.S. tax code that affects 2017 and later years. On December 22, 2017, the Securities and Exchange Commission staff issued Staff Accounting Bulletin No. 118 (“SAB 118”), which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC 740, *Income Taxes*. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that a company’s accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements.

The Tax Act reduced the U.S. federal corporate income tax rate from 35% to 21%, effective January 1, 2018. We have recorded a $15.0 million provisional tax charge for the year ended December 31, 2017 resulting from remeasuring our net deferred tax assets and liabilities. We have also recorded a $20.9 million provisional tax charge for the year ended December 31, 2017 related to a one-time transition tax on certain unremitted foreign earnings as required by the Tax Act. These provisional tax charges resulting from the Tax Act are calculated using our best estimates based upon the information currently available. These estimates may be impacted by the need for further analysis and future clarification and guidance regarding available tax accounting methods and elections, earnings and profits computations, and state tax conformity to federal tax changes. In addition, further regulatory guidance related to the Tax Act is expected to be issued in 2018 which may result in changes to our current estimates. Any revisions to the estimated impacts of the Tax Act will be recorded quarterly until the computations are complete which is expected no later than the fourth quarter of 2018.

We previously considered all of the earnings in our non-U.S. subsidiaries to be indefinitely reinvested and, accordingly, recorded no deferred income taxes related to the unremitted earnings. However, we are currently evaluating the potential foreign and U.S. state tax liabilities that would result from future repatriations, if any, and how the Tax Act will affect our existing accounting position with regard to the indefinite reinvestment of undistributed foreign earnings. We expect to complete this evaluation and determine the impact which the Tax Act may have on our indefinite reinvestment assertion within the measurement period provided by SAB 118.

Other aspects of the Tax Act, including the ”Global Intangible Low-Taxed Income” tax, ”Foreign Derived Intangible Income” deduction, and ”Base Erosion and Anti-Abuse” tax are effective beginning January 1, 2018, as such we have not yet fully calculated the impact of these tax law changes. We have not yet determined our policy election with respect to whether to record deferred taxes for basis differences expected to reverse as a result of the Global Intangible Low-Taxed Income tax provisions in future years, or in the period in which that tax was incurred.

The effective tax rates for the years ended December 31, 2017 and 2016 were approximately 88% and 30%, respectively. Our effective tax rate each year varies from our federal statutory rate because we operate in multiple foreign countries where we apply their tax laws and rates which vary from those that we apply to the income we generate from our domestic operations. Of the foreign jurisdictions in which we operate, our December 31, 2017 and 2016 effective tax rates were most impacted by our operations in Ireland, South Africa, and the United Kingdom. Excluding the impact of the US Tax Act, the effective tax rate for the year-ended December 31, 2017 was increased by the inclusion of certain foreign earnings in our U.S. tax return, offset by the tax benefit from foreign operations that are taxed at lower rates than the domestic rate, The effective tax rate for the year-ended December 31, 2016 was increased by the inclusion of certain foreign earnings in our U.S. tax return, offset by the tax benefit from foreign operations that are taxed at lower rates than the domestic rate. The effective tax rate for the year-ended December 31, 2016 was also reduced by net release of $9.0 million in valuation allowance primarily related to U.S. foreign tax credits.

Year-ended December 31, 2016 Compared to Year-ended December 31, 2015

	2016				2015	
	Amount	% of Total Revenue	$ Change vs 2015	% Change vs 2015	Amount	% of Total Revenue
Revenues:						
Software as a service and platform as a service	$ 411,289	41%	$ (34,768)	-8%	$ 446,057	43%
Initial license fees (ILFs)	203,156	20%	28,840	17%	174,316	17%
Monthly license fees (MLFs)	70,310	7%	(6,579)	-9%	76,889	7%
License	273,466	27%	22,261	9%	251,205	24%
Maintenance	233,476	23%	(8,419)	-3%	241,895	23%
Services	87,470	9%	(19,350)	-18%	106,820	10%
Total revenues	1,005,701	100%	(40,276)	-4%	1,045,977	100%
Operating expenses:						
Cost of revenue	444,914	44%	(27,385)	-6%	472,299	45%
Research and development	169,900	17%	23,976	16%	145,924	14%
Selling and marketing	118,082	12%	(11,325)	-9%	129,407	12%
General and administrative	113,617	11%	26,198	30%	87,419	8%
Gain on sale of CFS assets	(151,463)	-15%	(151,463)	100%	—	0%
Depreciation and amortization	89,521	9%	6,541	8%	82,980	8%
Total operating expenses	784,571	78%	(133,458)	-15%	918,029	88%
Operating income	221,130	22%	93,182	73%	127,948	12%
Other income (expense):						
Interest expense	(40,184)	-4%	1,188	-3%	(41,372)	-4%
Interest income	530	0%	144	37%	386	0%
Other, net	4,105	0%	(22,306)	-84%	26,411	3%
Total other income (expense)	(35,549)	-4%	(20,974)	144%	(14,575)	-1%
Income before income taxes	185,581	18%	72,208	64%	113,373	11%
Income tax expense	56,046	6%	28,109	101%	27,937	3%
Net income	$ 129,535	13%	$ 44,099	52%	$ 85,436	8%

Revenues

Total revenue for the year-ended December 31, 2016 decreased $40.3 million, or 4%, as compared to the same period in 2015. The decrease is the result of a $34.8 million, or 8%, decrease in SaaS and Platform revenue, an $8.4 million, or 3%, decrease in maintenance revenue, and a $19.4 million, or 18%, decrease in services revenue, partially offset by a $22.3 million, or 9%, increase in license revenue.

The CFS divestiture resulted in a $79.2 million decrease in total revenue for year-ended December 31, 2016. Total revenue was $13.5 million lower for the year-ended December 31, 2016, compared to the same period in 2015 due to the impact of foreign currencies weakening against the U.S. dollar. The addition of PAY.ON contributed $13.6 million of additional revenue for the year-ended December 31, 2016, compared to the same period in 2015. Excluding the impact of CFS, foreign currency, and the addition of PAY.ON, total revenue for the year-ended December 31, 2016, increased $38.8 million, or 4%, compared to the same period in 2015 primarily as a result of an increase in initial license fees, and SaaS and Platform revenue, partially offset by decreases in maintenance and services.

SaaS and Platform Revenue

SaaS and Platform revenue decreased $34.8 million, or 8%, during the year-ended December 31, 2016, as compared to the same period in 2015.The CFS divestiture resulted in decreased SaaS and Platform revenue of $70.3 million during the year-ended December 31, 2016. Total SaaS and Platform revenue was $2.1 million lower for the year-ended December 31, 2016, compared to the same period in 2015 due to the impact of foreign currencies weakening against the U.S. dollar. The addition of PAY.ON contributed $13.6 million in SaaS and Platform revenue for the year-ended December 31, 2016, compared to the same period in 2015. Excluding the impact of CFS, foreign currency, and the addition of PAY.ON, total SaaS and Platform revenue for the year-ended December 31, 2016, increased $24.0 million, or 5%, compared to the same period in 2015, which is primarily attributed to new customers adopting our on demand or SaaS and Platform offerings and existing customers adding new functionality or increasing transactions processed or customers enrolled.

Initial License Revenue

Initial license revenue increased by $28.8 million, or 17%, during the year-ended December 31, 2016, as compared to the same period in 2015. Initial license revenue was $3.6 million lower for year-ended December 31, 2016, compared to the same period in 2015 due to the impact of foreign currencies weakening against the U.S. dollar. Excluding the impact of foreign currency, initial license revenue for the year-ended December 31, 2016, increased $32.5 million, or 19%, compared to the same period in 2015.The increase in initial license revenue was primarily driven by an increase in capacity-related and non-capacity related license revenue of $26.5 million and $6.0 million, respectively, for the year-ended December 31, 2016, compared to the same period in 2015. The increase in capacity-related license revenue was attributable to the timing and relative size of capacity events during the year-ended December 31, 2016, as compared to the same period in 2015. The increase in non-capacity related license revenue was largely attributable to the execution of several license renewal arrangements and the release of deferred revenue for several large complex projects during the year-ended December 31, 2016, as compared to the same period in 2015.

Monthly License Revenue

Monthly license revenue decreased $6.6 million, or 9%, during the year-ended December 31, 2016, as compared to the same period in 2015. The CFS divestiture resulted in decreased monthly license revenue of $4.5 million during the year-ended December 31, 2016. Total monthly license revenue was $1.1 million lower for the year-ended December 31, 2016, compared to the same period in 2015 due to the impact of foreign currencies weakening against the U.S. dollar. Excluding the impact of CFS and foreign currency, monthly license revenue for the year-ended December 31, 2016, was relatively flat compared to the same period in 2015.

Maintenance Revenue

Maintenance revenue decreased $8.4 million, or 3%, during the year-ended December 31, 2016, as compared to the same period in 2015. Total maintenance revenue was $4.9 million lower for the year-ended December 31, 2016, as compared to the same period in 2015 due to the impact of foreign currencies weakening against the U.S. dollar. The CFS divestiture resulted in decreased maintenance revenue of $0.7 million during the year-ended December 31, 2016. Excluding the impact of foreign currency and CFS, total maintenance revenue for the year-ended December 31, 2016, decreased $2.8 million, or 1%, compared to the same period in 2015.

Services Revenue

Services revenue decreased $19.4 million, or 18%, during the year-ended December 31, 2016, as compared to the same period in 2015. The CFS divestiture resulted in decreased services revenue of $3.3 million during the year-ended December 31, 2016. Total services revenue was $1.6 million lower for the year-ended December 31, 2016, as compared to the same period in 2015 due to the impact of foreign currencies weakening against the U.S. dollar. Excluding the impact of CFS and foreign currency, total services revenue for the year-ended December 31, 2016, decreased $14.4 million, or 13%, compared to the same period in 2015.

During 2015, we completed several large, complex projects that resulted in recognition of services revenue as the work was performed and the projects were completed. The number and magnitude of such projects was lower in 2016. Additionally, our customers continue to transition from on-premise to on-demand software solutions. Services work performed in relation to our on-demand software solutions is recognized over a longer service period and is classified as on-demand.

Operating Expenses

Total operating expenses for the year-ended December 31, 2016 increased $18.0 million, or 2%, as compared to the same period of 2015 excluding the gain on sale of CFS assets.

The CFS divestiture resulted in a $73.1 million decrease in total operating expenses for the year-ended December 31, 2016. Total operating expenses were $13.8 million lower for the year-ended December 31, 2016, compared to the same period in 2015, due to the impact of foreign currencies weakening against the U.S. dollar. There were $28.6 million of incremental operating expenses related to the operations of PAY.ON for the year-ended December 31, 2016 compared to the same period in 2015. Excluding the impact of CFS, foreign currency, and the addition of PAY.ON, operating expenses increased $76.3 million, or 9%, for the year-ended December 31, 2016 principally reflecting higher cost of revenue, research and development, and general and administrative expenses.

Cost of Revenue

Cost of revenue decreased $27.4 million, or 6%, for the year-ended December 31, 2016, compared to the same period in 2015. The CFS divestiture resulted in a decrease of $51.5 million in cost of revenue for the year-ended December 31, 2016 compared to the same period in 2015. Cost of revenue was approximately $5.6 million lower due to the impact of foreign currencies weakening against the U.S. dollar. There was $3.5 million of incremental cost of maintenance, services and hosting related to the operations of PAY.ON for the year-ended December 31, 2016. Excluding the impact of CFS, foreign currency, and the addition of PAY.ON, cost of revenue increased $26.2 million, or 6%, for the year-ended December 31, 2016, primarily due to a $14.2 million increase in interchange processing fees, a $3.9 million increase in personnel and related expenses, a $4.5 million decrease in net deferred expenses, and a $2.5 million increase in stock-based compensation.

Research and Development

R&D increased $24.0 million, or 16%, for the year-ended December 31, 2016, compared to the same period in 2015. There were $11.9 million of incremental R&D related to the operations of PAY.ON for the year-ended December 31, 2016 compared to the same period in 2015. The CFS divestiture resulted in a decrease of $5.8 million in R&D for the year-ended December 31, 2016 compared to the same period in 2015. R&D was approximately $2.3 million lower due to the impact of foreign currencies weakening against the U.S. dollar. Excluding the impact of PAY.ON, CFS, and foreign currency, R&D increased $20.1 million, or 15%, for the year-ended December 31, 2016, primarily due to a $14.1 million increase in personnel and related expenses, a $4.5 million increase in stock-based compensation, and a $1.5 million decrease in net deferred expenses.

Selling and Marketing

Selling and marketing decreased $11.3 million, or 9%, for the year-ended December 31, 2016, compared to the same period in 2015. The CFS divestiture resulted in a decrease in selling and marketing of $7.2 million. Selling and marketing was $2.9 million lower for the year-ended December 31, 2016, compared to the same period in 2015, due to the impact of foreign currencies weakening against the U.S. dollar. There were $3.4 million of incremental selling and marketing expenses related to the operations of PAY.ON for the year-ended December 31, 2016. Excluding the impact of CFS, foreign currency, and the addition of PAY.ON, selling and marketing decreased $4.6 million, or 4%, for the year-ended December 31, 2016 primarily due to a decrease in personnel and related expenses.

General and Administrative

General and administrative increased $26.2 million, or 30%, for the year-ended December 31, 2016, compared to the same period in 2015. The CFS divestiture resulted in a decrease in general and administrative of $5.0 million for the year-ended December 31, 2016 compared to the same period in 2015. General and administrative expenses were approximately $2.2 million lower due to the impact of foreign currencies weakening against the U.S. dollar. There were $2.0 million of incremental operating expenses related to the operations of PAY.ON for the year-ended December 31, 2016. Excluding the impact of CFS, foreign currency, and the addition of PAY.ON, general and administrative increased $31.4 million, or 39%, for the year-ended December 31, 2016, primarily due to a $11.9 million increase in stock-based compensation expense, a $8.3 million increase in professional fees, a $5.4 million increase in significant transaction related expenditures, and a $5.8 million increase in personnel and related expenses.

Gain on Sale of CFS Assets

On March 3, 2016, we completed the sale of our CFS related assets and liabilities to Fiserv for $200.0 million and recognized a pre-tax gain of $151.5 million for the year-ended December 31, 2016.

Depreciation and Amortization

Depreciation and amortization increased $6.5 million, or 8%, for the year-ended December 31, 2016, compared to the same period in 2015. There was $7.8 million of incremental depreciation and amortization related to the operations of PAY.ON for the year-ended December 31, 2016 compared to the same period in 2015. The CFS divestiture resulted in a $3.6 million decrease in depreciation and amortization for the year-ended December 31, 2016 compared to the same period in 2015. Depreciation and amortization was approximately $0.9 million lower due to the impact of foreign currencies weakening against the U.S. dollar. Excluding the impact of PAY.ON, CFS, and foreign currency, depreciation and amortization increased $3.1 million, or 4%, due to an increase in capital expenditures during the past year.

Other Income and Expense

Interest expense for the year-ended December 31, 2016 decreased $1.2 million, or 3%, as compared to the same period in 2015 primarily due to lower comparative debt balances.

Other, net consists of foreign currency gain (loss) and other non-operating items. Foreign currency gain for the year-ended December, 2016 and 2015 were $4.1 million and $1.9 million, respectively. We realized a $24.5 million gain from the sale of our holdings in Yodlee, Inc. (“Yodlee”) stock during the year-ended December 31, 2015, which did not reoccur in 2016.

Income Taxes

The effective tax rates for the years ended December 31, 2016 and 2015 were approximately 30% and 25%, respectively. Our effective tax rate each year varies from our federal statutory rate because we operate in multiple foreign countries where we apply their tax laws and rates which vary from those that we apply to the income we generate from our domestic operations. Of the foreign jurisdictions in which we operate, our December 31, 2016 effective tax rate was most impacted by our operations in Ireland, South Africa, and the United Kingdom and our December 31, 2015 effective tax rate was most impacted by our operations in Ireland, Netherlands, South Africa, and the United Kingdom. Our effective rate is increased by the inclusion of certain foreign earnings in our U.S. tax return. In addition to the tax benefit from foreign operations that are taxed at lower rates than the domestic rate, the effective tax rate for the year-ended December 31, 2016 was also reduced by a net release of $9.0 million in valuation allowance primarily related to U.S. foreign tax credits. The effective tax rate for the year-ended December 31, 2015 was reduced by an $8.6 million benefit related to the Company's investment in Yodlee and change in the related valuation allowance. The effective tax rate for the year-ended December 31, 2015 was increased by an unrecognized tax benefit increase of $3.0 million.

Segment Results for Years Ended December 31, 2017, 2016, and 2015

In January 2017, the Company announced a change in organizational structure to align with its strategic direction. As a result, beginning January 1, 2017, the Company reports financial performance based on its new segments, ACI On Premise and ACI On Demand, and analyzes operating income as a measure of segment profitability.

The Company's chief operating decision maker ("CODM"), which is also our Chief Executive Officer, together with other senior management personnel, focus their review of consolidated financial information and the allocation of resources based upon the operating results, including revenues and operating income, for the segments ACI On Premise and ACI On Demand, separate from the Corporate operations.

ACI On Premise serves customers who manage their software on site. These on-premise customers use the Company's software to develop sophisticated, custom solutions, which are often part of a larger system located and managed at the customer site. These customers require a level of control, customization, and flexibility that ACI On Premise solutions can offer, and they have the resources and expertise to take a lead role in managing these solutions.

ACI On Demand serves the needs of banks, financial intermediaries, merchants, and corporates who use payments to facilitate their core business. The Company sees an increasing number of customers opting for software as a service and platform as a service offerings, which offer reduced complexity and cost as well as the ability to rapidly implement and scale.

Revenue is attributed to the reportable segments based upon the product sold and mechanism for delivery to the customer. Expenses are attributed to the reportable segments in one of three methods, (1) direct costs of the segment, (2) labor costs that can be attributed based upon time tracking for individual products, or (3) costs that are allocated. Allocated costs are generally marketing and sales related activities as well as information technology and facilities related expense for which multiple segments benefit. The Company also allocates certain depreciation costs to the segments.

Corporate and other consists of the corporate overhead costs that are not allocated to reportable segments. These overhead costs relate to human resources, finance, legal, accounting, merger and acquisition activity, amortization of acquisition-related intangibles, and other costs that are not considered when management evaluates segment performance. For the year-ended December 31, 2017, Corporate and other includes $46.7 million of general and administrative expense for the legal judgment discussed in Note 14 in the Notes to the Consolidated Financial Statements. For the year-ended December 31, 2016, Corporate and other also includes revenue and operating income from the operations and sale of CFS related assets and liabilities of $15.4 million and $151.7 million, respectively.

The following is selected financial data for the Company's reportable segments for the periods indicated (in thousands):

	Years Ended December 31, 2017	Years Ended December 31, 2016
Revenues:		
ACI On Premise	$ 598,590	$ 591,252
ACI On Demand	425,601	399,033
Corporate and other	—	15,416
	$1,024,191	$1,005,701
Depreciation and amortization expense:		
ACI On Premise	$ 13,094	$ 14,581
ACI On Demand	34,171	29,385
Corporate and other	54,959	59,488
	$ 102,224	$ 103,454
Stock-based compensation expense:		
ACI On Premise	$ 2,234	$ 6,894
ACI On Demand	2,230	6,876
Corporate and other	9,219	29,843
	$ 13,683	$ 43,613
Operating income (loss):		
ACI On Premise	$ 331,766	$ 290,713
ACI On Demand	(38,233)	(38,885)
Corporate and other	(208,893)	(30,698)
	$ 84,640	$ 221,130

ACI On Premise operating income increased $41.1 million, or 14%, for the year-ended December 31, 2017, compared to the same period in 2016, due to a $7.3 million increase in revenue and a $33.8 million decrease in operating expenses. The increase in ACI On Premise revenue was primarily due to a $19.7 million increase in license revenue, partially offset by a $11.4 million decrease in maintenance revenue. ACI On Premise operating expenses decreased $33.8 million, or 11%, for the year-ended December 31, 2017, compared to the same period in 2016, primarily due to a $14.3 million decrease in research and development expenses, a $9.6 million decrease in cost of revenue, and a $4.8 million decrease in selling and marketing expenses.

ACI On Demand operating loss decreased $0.7 million, or 2%, for the year-ended December 31, 2017, compared to the same period in 2016, primarily due to a $26.6 million increase in revenue, offset by a $25.9 million increase in operating expenses. The increase in ACI On Demand revenue was due to the increase in SaaS and Platform revenue excluding the impact of CFS. ACI On Demand operating expenses increased $25.9 million, or 6%, for the year-ended December 31, 2017, compared to the same period in 2016, primarily due to an increase of $19.8 million in payment card interchange fees. Excluding interchange fees, ACI On Demand operating expenses increased $6.1 million, primarily due to an $8.6 million increase in research and development expenses and a $4.8 million increase in depreciation expenses, partially offset by a $2.5 million decrease in cost of revenue and a $2.2 million decrease in selling and marketing expenses.

Corporate and other operating loss increased year over year primarily due to two items; 1) the BHMI judgment of $46.7 million recognized during the year-end December 31, 2017 and 2) the CFS gain on sale of assets of $151.5 recognized during the year-ended December 31, 2016. Excluding those two items, Corporate and other operating loss decreased approximately $20.0 million primarily due to a $20.6 million decrease in stock-based compensation.

LIQUIDITY AND CAPITAL RESOURCES

General

Our primary liquidity needs are: (i) to fund normal operating expenses; (ii) to meet the interest and principal requirements of our outstanding indebtedness; (iii) to fund cash portions of acquisitions, (iv) to fund capital expenditures and lease payments, and (v) to fund stock repurchases. We believe these needs will be satisfied using cash flow generated by our operations, our cash and cash equivalents, and available borrowings under our Credit Agreement.

Available Liquidity

The following table sets forth our available liquidity for the periods indicated (amount in thousands):

	December 31, 2017	December 31, 2016
Cash and cash equivalents	$ 69,710	$ 75,753
Availability under Revolving Credit Facility	498,000	154,500
Total liquidity	$567,710	$230,253

The increase in total liquidity is primarily attributable to additional committed revolving credit facility of $250.0 million (in accordance with the February 24, 2017 amendment to the Credit Agreement) and positive cash flow from operating activities of $146.2 million partially offset by net repayments of $57.0 million on the Credit Facility, $5.3 million of payments related to debt issuance costs, and $9.9 million of payments on other debt and capital leases.

Cash and cash equivalents consist of highly liquid investments with original maturities of three months or less. As of December 31, 2017, we had $69.7 million in cash and cash equivalents of which $46.5 million was held by our foreign subsidiaries. If these funds were needed for our operations in the U.S., we may potentially be required to accrue and pay foreign and U.S. state income taxes to repatriate these funds. We are currently evaluating our existing position regarding the permanent reinvestment of our foreign funds in light of the enactment of the Tax Act. We expect to complete our evaluation and determine the impact the Tax Act may have on our permanent reinvestment assertion within the measurement period provided by SAB 118.

Cash Flows

The following table sets forth summary cash flow data for the periods indicated (amounts in thousands).

	Years Ended December 31, 2017	2016	2015
Net cash provided by (used in):			
Operating activities	$146,197	$ 99,830	$ 187,994
Investing activities	(54,414)	129,633	(199,961)
Financing activities	(98,148)	(251,076)	44,640

2017 compared to 2016

Cash Flow from Operating Activities

Net cash flows provided by operating activities for the year-ended December 31, 2017 was $146.2 million compared to $99.8 million during the same period in 2016. The comparative period increase was primarily due to the timing of customer billings and receipts for the year-ended December 31, 2017, compared to the same period in 2016. Our current policy is to use our operating cash flow primarily to meet interest and principal payments on outstanding debt, as well as for funding capital expenditures, lease payments, acquisitions, and stock repurchases.

Cash Flow from Investing Activities

During 2017, we used cash of $54.4 million to purchase software, property and equipment as compared to $63.1 million during the same period in 2016. During 2016, we received net proceeds of $199.5 million from the sale of the CFS related assets and liabilities.

Cash Flow from Financing Activities

Net cash flows used by financing activities for the year-ended December 31, 2017 was $98.1 million as compared to $251.1 million during the same period in 2016. During 2017, we received net proceeds of $29.0 million on the Term Credit Facility and repaid a net of $86.0 million on the Revolving Credit Facility. We used $37.4 million to repurchase shares of common stock during the year-ended December 31, 2017. In addition, during the year-ended December 31, 2017, we received proceeds of $16.8 million from the exercises of stock options and issuance of common stock under our 2017 Employee Stock Purchase Plan, and used $5.3 million for the repurchase of restricted stock for tax withholdings. During 2016, we used the proceeds from the CFS divestiture to partially fund the repayment of $166.0 million on the revolver portion of the Credit Facility and $95.3 million of the term portion of the Credit Facility. Additionally, we used $60.1 million to repurchase shares of common stock during the year-ended December 31, 2016. In addition, during the year-ended December 31, 2016, we received proceeds of $12.3 million from the exercises of stock options and the issuance of common stock under our 1999 Employee Stock Purchase Plan, as amended, and used $3.0 million for the repurchase of restricted stock and performance shares for tax withholdings.

2016 compared to 2015

Cash Flow from Operating Activities

Net cash flows provided by operating activities for the year-ended December 31, 2016 was $99.8 million compared to $188.0 million during the same period in 2015. The comparative period decrease was primarily due to the timing of customer billings and receipts for the year-ended December 31, 2016, compared to the same period in 2015. Our current policy is to use our operating cash flow primarily to meet interest and principal payments on outstanding debt, as well as for funding capital expenditures, lease payments, acquisitions, and stock repurchases.

Cash Flow from Investing Activities

During 2016, we received net proceeds of $199.5 million from the sale of the CFS related assets. In addition, we used $63.1 million to purchase software, property and equipment as compared to $48.9 million during the same period in 2015. The increase is primarily driven by proceeds used to build out the Company's new data center in Ireland. We received proceeds of $35.3 million on our sale of our holdings in Yodlee common stock during the year-ended December 31, 2015. In addition, during the year-ended December 31, 2015, we used $179.4 million of cash, net of $1.6 million in cash acquired, to acquire PAY.ON.

Cash Flow from Financing Activities

During 2016, we used the proceeds from the CFS divestiture to partially fund the repayment of $166.0 million on the revolver portion of the Credit Facility and $95.3 million of the term portion of the Credit Facility. We used $60.1 million to repurchase shares of common stock during the year-ended December 31, 2016. In addition, during the year-ended December 31, 2016, we received proceeds of $12.3 million from the exercises of stock options and the issuance of common stock under our 1999 Employee Stock Purchase Plan, as amended, and used $3.0 million for the repurchase of restricted stock and performance shares for tax withholdings. We received proceeds of $298.0 million and repaid $164.0 million on the Revolving Credit Facility during the year-ended December 31, 2015. We repaid $87.4 million on the Term Credit Facility during the year-ended December 31, 2015.

We may decide to use cash to acquire new products and services or enhance existing products and services through acquisitions of other companies, product lines, technologies and personnel, or through investments in other companies.

We believe that our existing sources of liquidity, including cash on hand and cash provided by operating activities, will satisfy our projected liquidity requirements, which primarily consists of working capital requirements, for the next twelve months and foreseeable future.

Debt

Credit Agreement

As of December 31, 2017, we had $2.0 million and $394.3 million outstanding under our Revolving and Term Credit Facility portions of our Credit Agreement, respectively, with up to $498.0 million of unused borrowings under the Revolving Credit Facility. The Credit Agreement contains certain affirmative and negative covenants, including limitations on the incurrence of indebtedness, asset dispositions, acquisitions, investments, dividends and other restricted payments, liens and transactions with affiliates. The Credit Agreement also contains financial covenants relating to maximum permitted leverage ratio and the minimum interest coverage ratio. The facility does not contain any subjective acceleration features and does not have any required payment or principal reduction schedule and is included as a long-term liability in our consolidated balance sheet. On June 27, 2017, the Company and the Administrative Agent entered into an amendment to the Credit Agreement. The amendment revised the definition of "Consolidated EBITDA" to exclude the expense from the BHMI judgment and related fees, expenses, and interest thereto, up to $50.0 million from the calculation in the period recorded. At December 31, 2017 (and at all times during this period) we were in compliance with our debt covenants. The interest rate in effect at December 31, 2017 was 3.07%.

Letter of Credit

On February 29, 2016, the Company entered into a standby letter of credit (the "Letter of Credit"), under the terms of the Credit Agreement, for $25.0 million. On October 26, 2016, the Letter of Credit was renewed at $7.5 million. On June 15, 2017, the Letter of Credit was renewed at $5.0 million. The Company cancelled the Letter of Credit on August 24, 2017.

Senior Notes

On August 20, 2013, the Company completed a $300.0 million offering of 6.375% Senior Notes due in 2020 (the "Notes") at an issue price of 100% of the principal amount in a private placement for resale to qualified institutional buyers. The Notes bear an interest rate of 6.375% per annum, payable semi-annually in arrears on August 15 and February 15 of each year, commencing on February 15, 2014. The Notes will mature on August 15, 2020.

Stock Repurchase Program

As of September 12, 2012, our Board of Directors had approved a stock repurchase program authorizing us, from time to time as market and business conditions warrant, to acquire up to $262.1 million of our common stock. On September 13, 2012, our Board of Directors approved the repurchase of up to 7,500,000 shares of our common stock, or up to $113.0 million, in place of the remaining repurchase amounts previously authorized. In July 2013 and again in February 2014, our Board of Directors approved an additional $100.0 million for the stock repurchase program, for a total of an additional $200.0 million.

The Company repurchased 1,653,573 shares for $37.4 million under the program during the year-ended December 31, 2017. Under the program to date, the Company has repurchased 41,782,966 shares for approximately $493.3 million. The maximum remaining authorized for purchase under the stock repurchase program was approximately $40.8 million as of December 31, 2017.

Subsequent to December 31, 2017, the Company repurchased an additional 1,346,427 shares for $31.1 million under the repurchase program leaving a maximum of $9.7 million authorized for repurchases. On February 19, 2018, the Board of Directors approved $200.0 million for the stock repurchase program.

There is no guarantee as to the exact number of shares that will be repurchased by us. Repurchased shares are returned to the status of authorized but unissued shares of common stock. In March 2005, our Board of Directors approved a plan under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate the repurchase of shares of common stock under the existing stock repurchase program. Under our Rule 10b5-1 plan, we have delegated authority over the timing and amount of repurchases to an independent broker who does not have access to inside information about the Company. Rule 10b5-1 allows us, through the independent broker, to purchase shares at times when we ordinarily would not be in the market because of self-imposed trading blackout periods, such as the time immediately preceding the end of the fiscal quarter through a period three business days following our quarterly earnings release.

Contractual Obligations and Commercial Commitments

We lease office space and equipment under operating leases that run through October 2028. Additionally, we have entered into a Credit Agreement that matures in 2022 and have issued Senior Notes that mature in 2020.

Contractual obligations as of December 31, 2017 are as follows (in thousands):

	Payments due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Contractual Obligations					
Operating lease obligations	$ 86,764	$ 17,172	$ 27,854	$ 15,259	$ 26,479
Term credit facility	394,250	20,750	62,250	311,250	—
Revolving credit facility	2,000	—	—	2,000	—
Senior notes	300,000	—	300,000	—	—
Term credit facility interest (1)	43,583	11,865	21,261	10,457	—
Revolving credit facility interest (1)	256	61	123	72	—
Senior Notes Interest (2)	47,813	19,125	28,688	—	—
Financed internally used software (3)	1,858	1,523	335	—	—
Total	$876,524	$ 70,496	$440,511	$339,038	$ 26,479

(1) Based upon the Credit Facility debt outstanding and interest rate in effect at December 31, 2017 of 3.07%.
(2) Based upon Senior Notes issued of $300.0 million at per annum rate of 6.375%.
(3) During the year-ended December 31, 2015, we financed multiple three-year license agreement for certain internally-used software for a total value of $20.4 million with payments due through November 2018. Of this amount, $1.9 million remains outstanding at December 31, 2017. We recorded $1.5 million in other current liabilities and $0.4 million in other non-current liabilities in our consolidated balance sheet as of December 31, 2017.

We are unable to reasonably estimate the ultimate amount or timing of settlement of our reserves for income taxes under Accounting Standards Codification (“ASC”) 740, *Income Taxes*. The liability for unrecognized tax benefits at December 31, 2017 is $27.2 million.

Off-Balance Sheet Arrangements

Settlement Accounts

We enter into agreements with certain clients to process payment funds on their behalf. When an automated clearing house or automated teller machine network payment transaction is processed, a transaction is initiated to withdraw funds from the designated source account and deposit them into a settlement account, which is a trust account maintained for the benefit of our clients. A simultaneous transaction is initiated to transfer funds from the settlement account to the intended destination account. These "back to back" transactions are designed to settle at the same time, usually overnight, such that we receive the funds from the source at the same time as it sends the funds to their destination. However, due to the transactions being with various financial institutions there may be timing differences that result in float balances. These funds are maintained in accounts for the benefit of our clients which are separate from our corporate assets. As we do not take ownership of the funds, the settlement accounts are not included in our balance sheet. We are entitled to interest earned on the fund balances. The collection of interest on these settlement accounts is considered in our determination of our fee structure for clients and represents a portion of the payment for services performed by us. The amount of settlement funds as of December 31, 2017 and 2016 were $238.9 million and $270.0 million, respectively.

We do not have any other obligations that meet the definition of an off-balance sheet arrangement and that have or are reasonably likely to have a material effect on our consolidated financial statements.

Critical Accounting Policies and Estimates

The preparation of the consolidated financial statements requires that we make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We base our estimates on historical experience and other assumptions that we believe to be proper and reasonable under the circumstances. We continually evaluate the appropriateness of estimates and assumptions used in the preparation of our consolidated financial statements. Actual results could differ from those estimates.

The following key accounting policies are impacted significantly by judgments, assumptions and estimates used in the preparation of the consolidated financial statements. See Note 1, *Nature of Business and Summary of Significant Accounting Policies,* in the Notes to Consolidated Financial Statements for a further discussion of revenue recognition and other significant accounting policies.

Revenue Recognition

For software license arrangements for which services rendered are primarily related to installation of core software and are not considered essential to the functionality of the software, we recognize revenue upon delivery, provided (1) there is persuasive evidence of an arrangement, (2) collection of the fee is considered probable, and (3) the fee is fixed or determinable. In most arrangements, because vendor-specific objective evidence of fair value does not exist for the license element, we use the residual method to determine the amount of revenue to be allocated to the license element. Under the residual method, the fair value of all undelivered elements, such as post contract customer support or other products or services, is deferred and subsequently recognized as the products are delivered or the services are performed, with the residual difference between the total arrangement fee and revenues allocated to undelivered elements being allocated to the delivered element. For software license arrangements in which we have concluded that collectability issues may exist, revenue is recognized as cash is collected, provided all other conditions for revenue recognition have been met. In making the determination of collectability, we consider the creditworthiness of the customer, economic conditions in the customer's industry and geographic location, and general economic conditions.

When a software license arrangement includes services to provide significant modification or customization of software, those services are considered essential to the functionality of the software and are not considered to be separable from the software. Accounting for such services delivered over time is referred to as contract accounting. Under contract accounting, we generally use the percentage-of-completion method. Under the percentage-of-completion method, we record revenue for the software license and services over the development and implementation period, with the percentage of completion generally measured by the percentage of labor hours incurred to-date to estimated total labor hours for each contract. Estimated total labor hours for each contract are based on the project scope, complexity, skill level requirements, and similarities with other projects of similar size and scope. For those contracts subject to contract accounting, estimates of total revenue and profitability under the contract consider amounts due under extended payment terms. We recognize revenue under these arrangements based on the lesser of payments that become due or the revenue calculated under the percentage-of-completion method based on progress toward completion in a given reporting period. For arrangements where we believe it is assured that no loss will be incurred under the arrangement and fair value for maintenance services does not exist, all revenue is deferred until services are completed.

Certain of our arrangements are through unrelated distributors or sales agents. In these situations, we evaluate additional factors such as the financial capabilities, the distribution capabilities, and risks of rebates, returns, or credits in determining whether revenue should be recognized upon sale to the distributor or sales agent ("sell-in") or upon distribution to an end-customer ("sell-through"). Judgment is required in evaluating the facts and circumstances of our relationship with the distributor or sales agent as well as our operating history and practices that can impact the timing of revenue recognition related to these arrangements.

We may execute more than one contract or agreement with a single customer. The separate contracts or agreements may be viewed as one multiple-element arrangement or separate arrangements for revenue recognition purposes. We evaluate whether the agreements were negotiated as part of a single project, whether the products or services are interrelated or interdependent, whether fees in one arrangement are tied to performance in another arrangement, and whether elements in one arrangement are essential to the functionality in another arrangement in order to reach appropriate conclusions regarding whether such arrangements are related or separate. Those conclusions can impact the timing of revenue recognition related to those arrangements.

Allowance for Doubtful Accounts

We maintain a general allowance for doubtful accounts based on our historical experience, along with additional customer-specific allowances. We regularly monitor credit risk exposures in our accounts receivable. In estimating the necessary level of our allowance for doubtful accounts, management considers the aging of our accounts receivable, the creditworthiness of our customers, economic conditions within the customer's industry, and general economic conditions, among other factors. Should any of these factors change, the estimates made by management would also change, which in turn would impact the level of our future provision for doubtful accounts. Specifically, if the financial condition of our customers were to deteriorate, affecting their ability to make payments, additional customer-specific provisions for doubtful accounts may be required. Also, should deterioration occur in general economic conditions, or within a particular industry or region in which we have a number of customers, additional provisions for doubtful accounts may be recorded to reserve for potential future losses. Any such additional provisions would reduce operating income in the periods in which they were recorded.

Intangible Assets and Goodwill

Our business acquisitions typically result in the recording of intangible assets, and the recorded values of those assets may become impaired in the future. As of December 31, 2017 and December 31, 2016 our intangible assets, excluding goodwill, net of accumulated amortization, were $191.3 million and $203.6 million, respectively. The determination of the value of such intangible assets requires management to make estimates and assumptions that affect the consolidated financial statements. We assess potential impairments to intangible assets when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset may not be recovered. Judgments regarding the existence of impairment indicators and future cash flows related to intangible assets are based on operational performance of our businesses, market conditions, and other factors. Although there are inherent uncertainties in this assessment process, the estimates and assumptions used, including estimates of future cash flows, volumes, market penetration and discount rates, are consistent with our internal planning. If these estimates or their related assumptions change in the future, we may be required to record an impairment charge on all or a portion of our intangible assets. Furthermore, we cannot predict the occurrence of future impairment-triggering events nor the impact such events might have on our reported asset values. Future events could cause us to conclude that impairment indicators exist and that intangible assets associated with acquired businesses are impaired. Any resulting impairment loss could have an impact on our results of operations.

Other intangible assets are amortized using the straight-line method over periods ranging from three years to 20 years.

As of December 31, 2017 and 2016, our goodwill was $909.7 million. In accordance with ASC 350, *Intangibles – Goodwill and Other,* we assess goodwill for impairment annually during the fourth quarter of our fiscal year using October 1 balances or when there is evidence that events or changes in circumstances indicate that the carrying amount of the asset may not be recovered. We evaluate goodwill at the reporting unit level and have identified our reportable segments, ACI On Premise and ACI On Demand, as our reporting units. Recoverability of goodwill is measured using a discounted cash flow model incorporating discount rates commensurate with the risks involved. Use of a discounted cash flow model is common practice in impairment testing in the absence of available transactional market evidence to determine the fair value.

The key assumptions used in the discounted cash flow valuation model include discount rates, growth rates, cash flow projections and terminal value rates. Discount rates, growth rates and cash flow projections are the most sensitive and susceptible to change as they require significant management judgment. Discount rates are determined by using a weighted average cost of capital ("WACC"). The WACC considers market and industry data as well as Company-specific risk factors. Operational management, considering industry and Company-specific historical and projected data, develops growth rates and cash flow projections for each reporting unit. Terminal value rate determination follows common methodology of capturing the present value of perpetual cash flow estimates beyond the last projected period assuming a constant WACC and low long-term growth rates. If the calculated fair value is less than the current carrying value, impairment of the reporting unit may exist. The implied fair value of goodwill is determined in a manner similar to how goodwill is calculated in a business combination. If the implied fair value of goodwill exceeds the carrying value of goodwill assigned to the reporting unit, there is no impairment. If the carrying value of goodwill assigned to a reporting unit exceeds the implied fair value of the goodwill, an impairment charge is recorded to write down the carrying value. The calculated fair value substantially exceeded the current carrying value for all reporting units. No reporting units were deemed to be at risk of failing Step 1 of the goodwill impairment test under ASC 350.

Business Combinations

We apply the provisions of ASC 805, *Business Combinations*, in the accounting for our acquisitions. It requires us to recognize separately from goodwill the assets acquired and the liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred and the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While we use our best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations.

Critical estimates in valuing certain intangible assets include but are not limited to future expected cash flows from customer relationships, covenants not to compete and acquired developed technologies; brand awareness and market position, as well as assumptions about the period of time the brand will continue to be used in our product portfolio; and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

Other estimates associated with the accounting for acquisitions may change as additional information becomes available regarding the assets acquired and liabilities assumed, as more fully discussed in Note 2, *Acquisitions*, in the Notes to Consolidated Financial Statements.

Stock-Based Compensation

Under the provisions of ASC 718, *Compensation – Stock Compensation*, stock-based compensation cost for stock option awards is estimated at the grant date based on the award's fair value as calculated by the Black-Scholes option-pricing model and is recognized as expense ratably over the requisite service period. We recognize stock-based compensation costs for only those awards that are probable of vesting. The Black-Scholes option-pricing model requires various highly judgmental assumptions including volatility and expected option life. If any of the assumptions used in the Black-Scholes model change significantly, stock-based compensation expense may differ materially for future awards from that recorded for existing awards.

On March 23, 2016, the Company's Board of Directors (the "Board") approved the 2016 Equity and Performance Incentive Plan (the "2016 Incentive Plan"). The 2016 Incentive Plan is intended to meet the Company's objective of balancing stockholder concerns about dilution with the need to provide appropriate incentives to achieve Company performance objectives. The 2016 Incentive Plan was adopted by the stockholders on June 14, 2016. Following the adoption of the 2016 Incentive Plan, the 2005 Equity and Performance Incentive Plan, as amended (the "2005 Incentive Plan") was terminated. Termination of the 2005 Incentive Plan did not affect any equity awards outstanding under the 2005 Incentive Plan.

Supplemental options granted pursuant to the 2005 Incentive Plan are granted at an exercise price not less than the market value per share of the Company's common stock on the date of the grant. These options vest, if at all, based upon (i) tranche one - any time after the third anniversary date if the stock has traded at 133% of the exercise price for at least 20 consecutive trading days, (ii) tranche two - any time after the fourth anniversary date if the stock has traded at 167% of the exercise price for at least 20 consecutive trading days, and (iii) tranche three - any time after the fifth anniversary date if the stock has traded at 200% of the exercise price for at least 20 consecutive trading days. The employees must also remain employed with us as of the anniversary date in order for the options to vest. The exercise price of the supplemental stock options is the closing market price on the date the awards were granted. In order to determine the grant date fair value of the supplemental stock options, a Monte Carlo simulation model was used.

Long term incentive program performance share awards ("LTIP Performance Shares") were granted during the years ended December 31, 2017, 2016, and 2015, pursuant to our 2016 Incentive Plan and 2005 Incentive Plan. These awards are earned, if at all, based on the achievement over a specified period of performance goals related to certain performance metrics. In order to determine compensation expense to be recorded for these LTIP Performance Shares, each quarter management evaluates the probability that the target performance goals will be achieved, if at all, and the anticipated level of attainment.

During the years ended December 31, 2017, 2016, and 2015, pursuant to our 2016 Incentive Plan and 2005 Incentive Plan, we granted restricted share awards ("RSAs"). These awards have requisite service periods of three years and vest in increments of 33% on the anniversary dates of grants. Under each arrangement, stock is issued without direct cost to the employee. We estimate the fair value of the RSAs based upon the market price of our stock at the date of grant. The RSA grants provide for the payment of dividends on our common stock, if any, to the participant during the requisite service period (vesting period) and the participant has voting rights for each share of common stock.

During the year-ended December 31, 2015, pursuant to our 2005 Incentive Plan, we granted Performance-Based Restricted Share Awards ("PBRSAs"). The PBRSA grants provide for the payment of dividends on our common stock, if any, to the participant during the requisite service period (vesting period) and the participant has voting rights for each share of common stock. These PBRSA awards are earned, if at all, based upon the achievement of performance goals over a specific period (the "Performance Period") and completion of the service period. In no event will any of the PBRSA shares become earned if our earnings before income tax, depreciation, and amortization ("EBITDA") is below a predetermined minimum threshold level at the conclusion of the Performance Period. Assuming achievement of the predetermined EBITDA threshold level, up to 150% of the PBRSA shares may be earned upon achievement of performance goals equal to or exceeding the maximum target levels for the performance goals over the Performance Period. Management will evaluate, on a quarterly basis, the probability that the threshold performance goals will be achieved, if at all, and the anticipated level of attainment in order to determine the amount of compensation costs to record in the consolidated financial statements. We recognize compensation expense for PBRSAs on a straight-line basis over the requisite service periods.

During the year-ended December 31, 2016, pursuant to our 2005 Incentive Plan, we granted Retention Restricted Share Awards (“Retention RSAs”). The Retention RSA awards granted to named executive officers have a requisite service period (vesting period) of 1.3 years and vest 50% on July 1, 2016 and 50% on July 1, 2017. Retention RSA awards granted to employees other than named executive officers have a vesting period of 0.8 years and vest 50% on July 1, 2016 and 50% on January 1, 2017. Under each agreement, stock is issued without direct cost to the employee. We estimate the fair value of the Retention RSAs based upon the market price of the Company’s stock at the date of grant. The Retention RSA grants provide for the payment of dividends on our common stock, if any, to the participant during the requisite service period and the participant has voting rights for each share of common stock. We recognize compensation expense for Retention RSAs on a straight-line basis over the requisite service period.

During the year-ended December 31, 2017, the Company granted total shareholder return (“TSR”) awards, pursuant to the 2016 Incentive Plan, to certain executive officers. TSRs are performance shares that are earned, if at all, based upon the Company’s total shareholder return as compared to a group of peer companies over a three-year performance period. The award payout can range from 0% to 200%. In order to determine the grant date fair value of the TSRs, a Monte Carlo simulation model is used. The Company recognizes compensation expense for the TSRs over a three-year performance period based on the grant date fair value.

The assumptions utilized in the Black-Scholes and Monte Carlo simulation option-pricing models as well as the description of the plans the stock-based awards are granted under are described in further detail in Note 11, *Stock-Based Compensation Plans*, in the Notes to Consolidated Financial Statements.

Accounting for Income Taxes

Accounting for income taxes requires significant judgments in the development of estimates used in income tax calculations. Such judgments include, but are not limited to, the likelihood we would realize the benefits of net operating loss carryforwards and/or foreign tax credit carryforwards, the adequacy of valuation allowances, and the rates used to measure transactions with foreign subsidiaries. As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. The judgments and estimates used are subject to challenge by domestic and foreign taxing authorities.

We account for income taxes in accordance with ASC 740, *Income Taxes*. As part of our process of determining current tax liability, we exercise judgment in evaluating positions we have taken in our tax returns. We periodically assess our tax exposures and establish, or adjust, estimated unrecognized benefits for probable assessments by taxing authorities, including the IRS, and various foreign and state authorities. Such unrecognized tax benefits represent the estimated provision for income taxes expected to ultimately be paid. It is possible that either domestic or foreign taxing authorities could challenge those judgments or positions and draw conclusions that would cause us to incur tax liabilities in excess of, or realize benefits less than, those currently recorded. In addition, changes in the geographical mix or estimated amount of annual pretax income could impact our overall effective tax rate.

To the extent recovery of deferred tax assets is not more likely than not, we record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. Although we have considered future taxable income along with prudent and feasible tax planning strategies in assessing the need for a valuation allowance, if we should determine that we would not be able to realize all or part of our deferred tax assets in the future, an adjustment to deferred tax assets would be charged to income in the period any such determination was made. Likewise, in the event we are able to realize our deferred tax assets in the future in excess of the net recorded amount, an adjustment to deferred tax assets would increase income in the period any such determination was made.

New Accounting Standards Recently Adopted

For information with respect to recent accounting pronouncements and the impact of these pronouncements on our consolidated financial statements see Note 1, *Nature of Business and Summary of Significant Accounting Policies*, in the Notes to Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Excluding the impact of changes in interest rates and the uncertainty in the global financial markets, there have been no material changes to our market risk for the year-ended December 31, 2017. We conduct business in all parts of the world and are thereby exposed to market risks related to fluctuations in foreign currency exchange rates. The U.S. dollar is the single largest currency in which our revenue contracts are denominated. Thus, any decline in the value of local foreign currencies against the U.S. dollar results in our products and services being more expensive to a potential foreign customer, and in those instances where our goods and services have already been sold, may result in the receivables being more difficult to collect. Additionally, any decline in the value of the U.S. dollar in jurisdictions where the revenue contracts are denominated in U.S. dollars and operating expenses are incurred in local currency will have an unfavorable impact to operating margins. We at times enter into revenue contracts that are denominated in the country’s local currency, principally in Australia, Canada, the United Kingdom and other European countries. This practice serves as a natural hedge to finance the local currency expenses incurred in those locations. We have not entered into any foreign currency hedging transactions. We do not purchase or hold any derivative financial instruments for the purpose of speculation or arbitrage.

The primary objective of our cash investment policy is to preserve principal without significantly increasing risk. Based on our cash investments and interest rates on these investments at December 31, 2017, and if we maintained this level of similar cash investments for a period of one year, a hypothetical ten percent increase or decrease in effective interest rates would increase or decrease interest income by less than $0.1 million annually.

We had approximately $696.3 million of debt outstanding at December 31, 2017 with $300.0 million in Senior Notes and $396.3 million outstanding under our Credit Facility. Our Senior Notes are fixed-rate long-term debt obligations with a 6.375% interest rate. Our Credit Facility has a floating rate which was 3.07% at December 31, 2017. The potential increase (decrease) in interest expense for the Credit Facility from a hypothetical ten percent increase (decrease) in effective interest rates would be approximately $1.2 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The required consolidated financial statements and notes thereto are included in this Annual Report and are listed in Part IV, Item 15.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None

ITEM 9A. CONTROLS AND PROCEDURES

a) Evaluation of Disclosure Controls and Procedures

Our management, under the supervision of and with the participation of the Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the “Exchange Act”)) as of the end of the period covered by this report, December 31, 2017.

In connection with our evaluation of disclosure controls and procedures, we have concluded that our disclosure controls and procedures are effective as of December 31, 2017.

b) Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with United States Generally Accepted Accounting Principles (“US GAAP”). Under the supervision of, and with the participation of our Chief Executive Officer and Chief Financial Officer, management assessed the effectiveness of internal control over financial reporting as of December 31, 2017. Management based its assessment on criteria established in “Internal Control Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2017.

The effectiveness of our internal control over financial reporting as of December 31, 2017 has been audited by Deloitte & Touche, LLP, an independent registered public accounting firm, and Deloitte & Touche, LLP has issued an attestation report on our internal control over financial reporting.

c) Changes in Internal Control over Financial Reporting

During our quarter ended December 31, 2017, we implemented internal controls to ensure we have adequately evaluated our contracts with customers and properly assessed the impact of ASC 606, *Revenue from Contract with Customers*, on our consolidated financial statements in preparation for adoption of ASC 606 during the quarter ending March 31, 2018.

There have been no additional changes during our quarter ended December 31, 2017 in our internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
ACI Worldwide, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of ACI Worldwide, Inc. and subsidiaries (the "Company") 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 (COSO). 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 COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2017, of the Company and our report dated February 27, 2018, expressed an unqualified opinion on those 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 included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and 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.

/s/ DELOITTE & TOUCHE LLP

Omaha, Nebraska
February 27, 2018

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information under the heading “Executive Officers of the Registrant” in Part 1, Item 1 of this Form 10-K is incorporated herein by reference.

The information required by this item with respect to our directors is included in the section entitled “Nominees” under “Proposal 1 – Election of Directors” in our Proxy Statement for the Annual Meeting of Stockholders to be held on June 12, 2018 (the “2018 Proxy Statement”) and is incorporated herein by reference.

Information included in the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” in our 2018 Proxy Statement is incorporated herein by reference.

Information related to the audit committee and the audit committee financial expert is included in the section entitled “Report of Audit Committee” in our 2018 Proxy Statement and is incorporated herein by reference. In addition, the information included in the sections entitled “Board Committees and Committee Meetings,” “Shareholder Recommendations for Director Nominees” and “Shareholder Nomination Process” within the “Corporate Governance” section of our 2018 Proxy Statement is incorporated herein by reference.

Code of Business Conduct and Code of Ethics

We have adopted a Code of Business Conduct and Ethics for our directors, officers (including our principal executive officer, principal financial officer, principal accounting officer and controller) and employees. We have also adopted a Code of Ethics for the Chief Executive Officer and Senior Financial Officers (the “Code of Ethics”), which applies to our Chief Executive Officer, our Chief Financial Officer, our Chief Accounting Officer, Controller, and persons performing similar functions. The full text of both the Code of Business Conduct and Ethics and Code of Ethics is published on our website at www.aciworldwide.com in the “Investors – Corporate Governance” section. We intend to disclose future amendments to, or waivers from, certain provisions of the Code of Business Conduct and Ethics and the Code of Ethics on our website promptly following the adoption of such amendment or waiver.

ITEM 11. EXECUTIVE COMPENSATION

Information included in the sections entitled “Director Compensation,” “Compensation Discussion and Analysis,” “Compensation Committee Report,” “Executive Compensation” and “Compensation Committee Interlocks and Insider Participation” in our 2018 Proxy Statement is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information included in the sections entitled “Information Regarding Security Ownership” in our 2018 Proxy Statement is incorporated herein by reference.

Information included in the section entitled “Information Regarding Equity Compensation Plans” in our 2018 Proxy Statement is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Information included in the section entitled “Certain Relationships and Related Transactions,” in our 2018 Proxy Statement is incorporated herein by reference.

Information included in the sections entitled “Director Independence” and “Board Committees and Committee Meetings” in the “Corporate Governance” section of our 2018 Proxy Statement is incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information included in the sections entitled ”Independent Registered Public Accounting Firm Fees” and ”Pre-Approval of Audit and Non-Audit Services” under “Proposal 2 – Ratification of Appointment of the Company’s Independent Registered Public Accounting Firm” in our 2018 Proxy Statement is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Documents filed as part of this annual report on Form 10-K:

(1) Financial Statements. The following index lists consolidated financial statements and notes thereto filed as part of this annual report on Form 10-K:

(2) Financial Statement Schedules. All schedules have been omitted because they are not applicable or the required information is included in the consolidated financial statements or notes thereto.

(3) Exhibits. A list of exhibits filed or furnished with this report on Form 10-K (or incorporated by reference to exhibits previously filed by ACI) is provided in the accompanying Exhibit Index.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
ACI Worldwide, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of ACI Worldwide, Inc. and subsidiaries (the "Company") as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the "financial statements"). In our opinion, the 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 three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

We have also 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 27, 2018, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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 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 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

Omaha, Nebraska
February 27, 2018
We have served as the Company's auditor since 2009.

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31, 2017	December 31, 2016
ASSETS		
Current assets		
Cash and cash equivalents	$ 69,710	$ 75,753
Receivables, net of allowances of $4,799 and $3,873, respectively	262,845	268,162
Recoverable income taxes	7,921	4,614
Prepaid expenses	23,219	25,884
Other current assets	58,126	33,578
Total current assets	421,821	407,991
Noncurrent assets		
Property and equipment, net	80,228	78,950
Software, net	155,386	185,496
Goodwill	909,691	909,691
Intangible assets, net	191,281	203,634
Deferred income taxes, net	66,749	77,479
Other noncurrent assets	36,483	39,054
TOTAL ASSETS	$ 1,861,639	$ 1,902,295
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 34,718	$ 42,873
Employee compensation	48,933	47,804
Current portion of long-term debt	17,786	90,323
Deferred revenue	107,543	105,191
Income taxes payable	9,898	11,334
Other current liabilities	102,904	78,841
Total current liabilities	321,782	376,366
Noncurrent liabilities		
Deferred revenue	51,967	49,863
Long-term debt	667,943	653,595
Deferred income taxes, net	16,910	26,349
Other noncurrent liabilities	38,440	41,205
Total liabilities	1,097,042	1,147,378
Commitments and contingencies (Note 14)		
Stockholders' equity		
Preferred stock; $0.01 par value; 5,000,000 shares authorized; no shares issued at December 31, 2017 and 2016	—	—
Common stock; $0.005 par value; 280,000,000 shares authorized; 140,525,055 shares issued at December 31, 2017 and 2016	702	702
Additional paid-in capital	610,345	600,344
Retained earnings	550,866	545,731
Treasury stock, at cost, 23,428,324 and 23,188,258 shares at December 31, 2017 and 2016, respectively	(319,960)	(297,760)
Accumulated other comprehensive loss	(77,356)	(94,100)
Total stockholders' equity	764,597	754,917
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 1,861,639	$ 1,902,295

The accompanying notes are an integral part of the consolidated financial statements.

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	FOR THE YEARS ENDED DECEMBER 31, 2017	2016	2015
Revenues			
Software as a service and platform as a service	$ 425,572	$ 411,289	$ 446,057
License	293,124	273,466	251,205
Maintenance	222,071	233,476	241,895
Services	83,424	87,470	106,820
Total revenues	1,024,191	1,005,701	1,045,977
Operating expenses			
Cost of revenue (1)	452,286	444,914	472,299
Research and development	136,921	169,900	145,924
Selling and marketing	107,885	118,082	129,407
General and administrative	153,032	113,617	87,419
Gain on sale of CFS assets	—	(151,463)	—
Depreciation and amortization	89,427	89,521	82,980
Total operating expenses	939,551	784,571	918,029
Operating income	84,640	221,130	127,948
Other income (expense)			
Interest expense	(39,013)	(40,184)	(41,372)
Interest income	564	530	386
Other, net	(2,619)	4,105	26,411
Total other income (expense)	(41,068)	(35,549)	(14,575)
Income before income taxes	43,572	185,581	113,373
Income tax expense	38,437	56,046	27,937
Net income	$ 5,135	$ 129,535	$ 85,436
Earnings per common share			
Basic	$ 0.04	$ 1.10	$ 0.73
Diluted	$ 0.04	$ 1.09	$ 0.72
Weighted average common shares outstanding			
Basic	118,059	117,533	117,465
Diluted	119,444	118,847	118,919

(1) The cost of revenue excludes charges for depreciation but includes amortization of purchased and developed software for resale.

The accompanying notes are an integral part of the consolidated financial statements.

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	FOR THE YEARS ENDED DECEMBER 31,		
	2017	2016	2015
Net income	$ 5,135	$129,535	$ 85,436
Other comprehensive income (loss):			
Unrealized gain on available-for-sale securities	—	—	1,488
Reclassification of unrealized gain to a realized gain on available-for-sale securities	—	—	(24,465)
Foreign currency translation adjustments	16,744	(22,524)	(28,716)
Total other comprehensive income (loss):	16,744	(22,524)	(51,693)
Comprehensive income	$21,879	$107,011	$ 33,743

The accompanying notes are an integral part of the consolidated financial statements.

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total
Balance as of December 31, 2014	$ 698	$551,713	$331,415	$(282,538)	$ (19,883)	$581,405
Net income	—	—	85,436	—	—	85,436
Other comprehensive loss	—	—	—	—	(51,693)	(51,693)
Stock-based compensation	—	18,380	—	—	—	18,380
Shares issued and forfeited, net, under stock plans including income tax benefits	—	(14,089)	—	34,231	—	20,142
Issuance of 476,750 shares under stock plan portion of PAY.ON acquisition agreement	3	(3)	—	—	—	—
Issuance of 227,917 shares of common stock for acquisition of PAY.ON	1	5,378	—	—	—	5,379
Repurchase of restricted stock and performance shares for tax withholdings	—	—	—	(4,649)	—	(4,649)
Balance as of December 31, 2015	702	561,379	416,851	(252,956)	(71,576)	654,400
Net income	—	—	129,535	—	—	129,535
Other comprehensive loss	—	—	—	—	(22,524)	(22,524)
Stock-based compensation	—	43,613	—	—	—	43,613
Shares issued and forfeited, net, under stock plans including income tax benefits	—	(5,204)	—	18,260	—	13,056
Repurchase of 3,020,926 shares of common stock	—	—	—	(60,089)	—	(60,089)
Repurchase of restricted stock for tax withholdings	—	—	—	(2,975)	—	(2,975)
Cumulative effect of accounting change, ASU 2016-09	—	556	(655)	—	—	(99)
Balance as of December 31, 2016	702	600,344	545,731	(297,760)	(94,100)	754,917
Net income	—	—	5,135	—	—	5,135
Other comprehensive income	—	—	—	—	16,744	16,744
Stock-based compensation	—	13,683	—	—	—	13,683
Shares issued and forfeited, net, under stock plans including income tax benefits	—	(3,682)	—	20,498	—	16,816
Repurchase of 1,653,573 shares of common stock	—	—	—	(37,387)	—	(37,387)
Repurchase of restricted stock for tax withholdings	—	—	—	(5,311)	—	(5,311)
Balance as of December 31, 2017	$ 702	$610,345	$550,866	$(319,960)	$ (77,356)	$764,597

The accompanying notes are an integral part of the consolidated financial statements.

ACI WORLDWIDE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	FOR THE YEARS ENDED DECEMBER 31,		
	2017	2016	2015
Cash flows from operating activities:			
Net income	$ 5,135	$ 129,535	$ 85,436
Adjustments to reconcile net income to net cash flows from operating activities:			
Depreciation	24,871	22,584	21,656
Amortization	77,353	80,870	75,775
Amortization of deferred debt issuance costs	4,286	5,567	6,244
Deferred income taxes	21,660	17,702	19,328
Stock-based compensation expense	13,683	43,613	18,380
Gain on sale of available-for-sale equity securities	—	—	(24,465)
Gain on sale of CFS assets	—	(151,463)	—
Other	435	806	2,725
Changes in operating assets and liabilities, net of impact of acquisitions:			
Receivables	(8,243)	(76,460)	(11,355)
Accounts payable	(1,700)	(13,920)	8,557
Accrued employee compensation	94	18,060	(1,998)
Current income taxes	(4,227)	14,510	(8,244)
Deferred revenue	439	3,015	(4,513)
Other current and noncurrent assets and liabilities	12,411	5,411	468
Net cash flows from operating activities	146,197	99,830	187,994
Cash flows from investing activities:			
Purchases of property and equipment	(25,717)	(40,812)	(27,283)
Purchases of software and distribution rights	(28,697)	(22,268)	(21,622)
Proceeds from sale of available-for-sale equity securities	—	—	35,311
Proceeds from sale of CFS assets	—	199,481	—
Acquisition of businesses, net of cash acquired	—	232	(179,367)
Other	—	(7,000)	(7,000)
Net cash flows from investing activities	(54,414)	129,633	(199,961)
Cash flows from financing activities:			
Proceeds from issuance of common stock	2,958	2,987	3,104
Proceeds from exercises of stock options	13,872	9,325	12,175
Repurchases of common stock	(37,387)	(60,089)	—
Repurchase of restricted stock and performance shares for tax withholdings	(5,311)	(2,975)	(4,649)
Proceeds from revolving credit facility	67,000	76,000	298,000
Proceeds from term portion of credit agreement	415,000	—	—
Repayments of revolving credit facility	(153,000)	(166,000)	(164,000)
Repayments of term portion of credit agreement	(386,040)	(95,293)	(87,352)
Payments on other debt and capital leases	(9,900)	(14,376)	(12,638)
Payment for debt issuance costs	(5,340)	(655)	—
Net cash flows from financing activities	(98,148)	(251,076)	44,640
Effect of exchange rate fluctuations on cash	322	(4,873)	(7,735)
Net increase (decrease) in cash and cash equivalents	(6,043)	(26,486)	24,938
Cash and cash equivalents, beginning of period	75,753	102,239	77,301
Cash and cash equivalents, end of period	$ 69,710	$ 75,753	$ 102,239
Supplemental cash flow information			
Income taxes paid, net	$ 37,817	$ 19,081	$ 24,036
Interest paid	$ 34,976	$ 35,053	$ 35,183

The accompanying notes are an integral part of the consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Business and Summary of Significant Accounting Policies

Nature of Business

ACI Worldwide, Inc., a Delaware corporation, and its subsidiaries (collectively referred to as "ACI" or the "Company"), develop, market, install, and support a broad line of software products and services primarily focused on facilitating electronic payments. In addition to its own products, the Company distributes, or acts as a sales agent for software developed by third parties. These products and services are used principally by banks, financial intermediaries, merchants, and corporates, both in domestic and international markets.

Consolidated Financial Statements

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. Recently acquired subsidiaries that are included in the Company's consolidated financial statements as of the date of their acquisition include: PAY.ON AG and its subsidiaries (collectively, "PAY.ON") acquired during the year-ended December 31, 2015. All intercompany balances and transactions have been eliminated.

Capital Stock

The Company's outstanding capital stock consists of a single class of common stock. Each share of common stock is entitled to one vote upon each matter subject to a stockholders vote and to dividends if and when declared by the Board of Directors.

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States ("U.S. 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 consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition, Receivables and Deferred Revenue

Software as a Service ("SaaS") and Platform as a Service ("Platform"). In accordance with Accounting Standards Codification ("ASC") 605-25, *Revenue Recognition – Multiple-Element Arrangements*, a multiple-deliverable arrangement is separated into more than one unit of accounting if the delivered item(s) has value to the customer on a standalone basis, and if the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of undelivered item(s) is considered probable and substantially in the control of the Company. If these criteria are not met, the arrangement is accounted for as a single unit of accounting which would result in revenue being recognized ratably over the contract term or being deferred until the earlier of when such criteria are met or when the last undelivered element is delivered. If these criteria are met for each, the arrangement consideration is allocated to the separate units of accounting based on each unit's relative selling price. The selling price for each element is based upon the following selling price hierarchy: vendor-specific objective evidence ("VSOE") if available, third party evidence ("TPE") if VSOE is not available, or estimated selling price if neither VSOE nor TPE is available.

The Company enters into SaaS-based and Platform-based arrangements that may consist of multiple service deliverables including initial implementation and setup services, on-going support services, and other services. The Company's SaaS and Platform products operate in a highly regulated and controlled environment which requires a highly specialized and unique set of initial implementation and setup services prior to the commencement of on-demand related services. Due to the essential and specialized nature of the implementation and setup services, these services do not qualify as separate units of accounting separate from the on-demand service as the delivered services do not have value to the customer on a stand-alone basis. The on-going support and other services are considered as separate units of accounting as are add-on products that do not impact the availability of functionality currently in use. The total arrangement consideration is allocated to each of the separate units of accounting based on their relative selling price and revenue is recognized over their respective service periods.

SaaS and Platform revenue also includes fees paid by our clients as a part of the electronic bill presentment and payment products. Fees may be paid by our clients or directly by their customers and may be a percentage of the underlying transaction amount, a fixed fee per executed transaction or a monthly fee for each customer enrolled. SaaS and Platform costs include payment card interchange fees, which assessments payable to banks and payment card processing fees are included in cost of revenue in the accompanying consolidated statements of operations.

License. The Company recognizes license revenue in accordance with ASC 985-605, *Revenue Recognition: Software*. For software license arrangements for which services rendered are primarily related to installation of core software and are not considered essential to the functionality of the software, the Company recognizes revenue upon delivery, provided (i) there is persuasive evidence of an arrangement, (ii) collection of the fee is considered probable and (iii) the fee is fixed or determinable. In most arrangements, VSOE of fair value does not exist for the license element; therefore, the Company uses the residual method under ASC 985-605 to determine the amount of revenue to be allocated to the license element. Under ASC 985-605, the fair value of all undelivered elements, such as post contract customer support (maintenance or "PCS") or other products or services, is deferred and subsequently recognized as the products are delivered or the services are performed, with the residual difference between the total arrangement fee and revenues allocated to undelivered elements being allocated to the delivered element.

When a software license arrangement includes services to provide significant modification or customization of software, those services are considered essential to the functionality of the software and are not separable from the software. These arrangements are accounted for in accordance with ASC 605-35, *Revenue Recognition: Construction-Type and Production-Type Contracts*, generally referred to as contract accounting. Under contract accounting, the Company generally uses the percentage-of-completion method. For those contracts subject to percentage-of-completion contract accounting, estimates of total revenue and profitability under the contract consider amounts due under extended payment terms. The Company recognizes revenue under these arrangements based on the lesser of payments that become due or the revenue calculated under the percentage-of-completion method. Under the percentage-of-completion method, the Company records revenue for the license and services over the development and implementation period, with the percentage of completion generally measured by the percentage of labor hours incurred to-date to estimated total labor hours for each contract. In the event project profitability is assured and estimable within a range, percentage-of-completion revenue recognition is computed using the lowest level of profitability in the range. If it is determined that a loss will result from the performance of a contract, the entire amount of the loss is recognized in the period in which it is determined that a loss will result.

For software license arrangements in which a significant portion of the fee is due more than 12 months after delivery or when payment terms are significantly beyond the Company's standard business practice, the license is deemed not to be fixed or determinable. For software license arrangements in which the fee is not considered fixed or determinable, the license is recognized as revenue as payments become due and payable, provided all other conditions for revenue recognition have been met. For software license arrangements in which the Company has concluded that collection of the fees is not probable, revenue is recognized as cash is collected, provided all other conditions for revenue recognition have been met. In making the determination of collectability, the Company considers the creditworthiness of the customer, economic conditions in the customer's industry and geographic location, and general economic conditions.

ASC 985-605 requires the seller of software that includes PCS to establish VSOE of fair value of the undelivered element of the contract in order to account separately for the PCS revenue. The Company has traditionally established VSOE of the fair value of PCS by reference to stated renewals, expressed in dollar terms, or separate sales with consistent pricing of PCS expressed in percentage terms. In determining whether a stated renewal is not substantive, the Company considers factors such as whether the period of the initial PCS term is relatively long when compared to the term of the software license or whether the PCS renewal rate is significantly below the Company's normal pricing practices. In determining whether PCS pricing is consistent, the Company considers the population of separate sales that are within a reasonably narrow range of the median within the identified market segment over the trailing 12 month period.

For those software license arrangements that include customer-specific acceptance provisions, such provisions are generally presumed to be substantive and the Company does not recognize revenue until the earlier of the receipt of a written customer acceptance, objective demonstration that the delivered product meets the customer-specific acceptance criteria or the expiration of the acceptance period. The Company recognizes revenues on such arrangements upon the earlier of receipt of written acceptance or the first production use of the software by the customer. In the absence of customer-specific acceptance provisions, software license arrangements generally grant customers a right of refund or replacement only if the licensed software does not perform in accordance with its published specifications. If the Company's product history supports an assessment by management that the likelihood of non-acceptance is remote, the Company recognizes revenue when all other criteria of revenue recognition are met.

For software license arrangements in which the Company acts as a sales agent for another company's products, revenues are recorded on a net basis. These include arrangements in which the Company does not take title to the products, is not responsible for providing the product or service, earns a fixed commission, or assumes credit risk only to the extent of its commission. For software license arrangements in which the Company acts as a distributor of another company's product, and in certain circumstances, modifies or enhances the product, revenues are recorded on a gross basis. These include arrangements in which the Company takes title to the products and is responsible for providing the product or service.

For software license arrangements in which the Company utilizes a third-party distributor or sales agent, the Company recognizes revenue on a sell-in basis when business practices and operating history indicate that there is no risk of returns, rebates, or credits and there are no other risks related to the distributor or sales agents' ability to honor payment or distribution commitments. For other arrangements in which any of the above factors indicate that there are risks of returns, rebates, or credits or any other risks related to the distributors' or sales agents' ability to honor payment or distribution commitments, the Company recognizes revenue on a sell-through basis.

For software license arrangements in which the Company permits the customer to receive unspecified future software products during the software license term, the Company recognizes revenue ratably over the license term, provided all other revenue recognition criteria have been met. For software license arrangements in which the Company grants the customer a right to exchange the original software product for specified future software products with more than minimal differences in features, functionality, and/or price, during the license term, revenue is recognized upon the earlier of delivery of the additional software products or at the time the exchange right lapses. For customers granted a right to exchange the original software product for specified future software products where the Company has determined price, feature, and functionality differences are minimal, the exchange right is accounted for as a like-kind exchange and revenue is recognized upon delivery of the currently licensed product. For software license arrangements in which the customer is charged variable license fees based on usage of the product, the Company recognizes revenue as usage occurs over the term of the licenses, provided all other revenue recognition criteria have been met.

Certain of the Company’s software license arrangements include PCS terms that fail to achieve VSOE of fair value due to non-substantive renewal periods, or contain a range of possible non-substantive PCS renewal amounts. For these arrangements, VSOE of fair value of PCS does not exist and revenues for the software license, PCS and services, if applicable, are considered to be one accounting unit and are therefore recognized ratably over the longer of the contractual service term or PCS term once the delivery of both services has commenced. The Company typically classifies revenues associated with these arrangements in accordance with the contractually specified amounts, which approximate fair value assigned to the various elements, including software license, maintenance and services, if applicable.

Maintenance. The Company typically enters into multi-year time-based software license arrangements that vary in length but are generally five years. These arrangements include an initial (bundled) PCS term of one year with subsequent renewals for additional years within the initial license period. The Company establishes VSOE of the fair value of PCS by reference to stated renewals for all identified market segments. For arrangements in which the Company looks to substantive renewal rates to evidence VSOE of fair value of PCS and in which the PCS renewal rate and term are substantive, VSOE of fair value of PCS is determined by reference to the stated renewal rate. For these arrangements, PCS revenues are recognized ratably over the PCS term specified in the contract. In arrangements where VSOE of fair value of PCS cannot be determined (for example, a time-based software license with a duration of one year or less or when the range of possible PCS renewal amounts is not sufficiently narrow or is significantly below the Company’s normal pricing practices), the Company recognizes revenue for the entire arrangement ratably over the longer of the initial PCS term or the services term (if any).

For those arrangements that meet the criteria to be accounted for under contract accounting, the Company determines whether VSOE of fair value exists for the PCS element. For those arrangements in which VSOE of fair value exists for the PCS element, PCS is accounted for separately and the balance of the arrangement is accounted for under ASC 985-605. For those arrangements in which VSOE of fair value does not exist for the PCS element all revenue is deferred until such time as the services are complete. Once services are complete, revenue is then recognized ratably over the remaining PCS period.

Services. The Company provides various professional services to customers, primarily project management, software implementation and software modification services. Revenues from arrangements to provide professional services are generally recognized as the related services are performed.

For those arrangements in which services revenue is deferred and the Company determines that the direct costs of services are recoverable, such costs are deferred and subsequently expensed in proportion to the related services revenue as it is recognized. For those arrangements that are accounted for under contract accounting, the Company accumulates and defers all direct and indirect costs allocable to the arrangement. For those arrangements that are not accounted for under contract accounting, the Company accumulates and defers all direct and incremental costs attributable to the arrangement.

Multiple Arrangements. The Company may execute more than one contract or agreement with a single customer. The separate contracts or agreements may be viewed as one multiple-element arrangement or separate agreements for revenue recognition purposes. The Company evaluates whether the agreements were negotiated as part of a single project, whether the products or services are interrelated or interdependent, whether fees in one arrangement are tied to performance in another arrangement, and whether elements in one arrangement are essential to the functionality in another arrangement in order to reach appropriate conclusions regarding whether such arrangements are related or separate. The conclusions reached can impact the timing of revenue recognition related to those arrangements.

Deferred Revenue. Deferred revenue includes amounts currently due and payable from customers, and payments received from customers, for software licenses, maintenance, SaaS and Platform revenue and/or services in advance of recording the related revenue.

Receivables and Concentration of Credit Risk. Receivables represent amounts billed and amounts earned that are to be billed in the near future. Included in accrued receivables are services and SaaS and Platform revenues earned in the current period but billed in the following period.

	December 31, 2017	December 31, 2016
Billed Receivables	$240,137	$250,116
Allowance for doubtful accounts	(4,799)	(3,873)
Billed, net	235,338	246,243
Accrued Receivables	27,507	21,919
Receivables, net	$262,845	$268,162

No customer accounted for more than 10% of the Company’s consolidated receivables balance as of December 31, 2017 or 2016.

The Company maintains a general allowance for doubtful accounts based on historical experience, along with additional customer -specific allowances. The Company regularly monitors credit risk exposures in accounts receivable. In estimating the necessary level of our allowance for doubtful accounts, management considers the aging of accounts receivable, the creditworthiness of customers, economic conditions within the customer’s industry, and general economic conditions, among other factors.

The following reflects activity in the Company’s allowance for doubtful accounts receivable (in thousands):

	Years Ended December 31, 2017	2016	2015
Balance, beginning of period	$(3,873)	$(5,045)	$(4,806)
Provision increase	(2,086)	(1,595)	(2,425)
Amounts written off, net of recoveries	1,305	2,551	2,088
Foreign currency translation adjustments and other	(145)	216	98
Balance, end of period	$(4,799)	$(3,873)	$(5,045)

Provision (increases) decreases recorded in general and administrative expenses during the years ended December 31, 2017, 2016, and 2015, reflect increases (decreases) in the allowance for doubtful accounts based upon collection experience in the geographic regions in which the Company conducts business, net of collection of customer-specific receivables which were previously reserved for as doubtful of collection.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalents. The Company’s cash and cash equivalents includes holdings in checking, savings, money market, and overnight sweep accounts, all of which have daily maturities, as well as time deposits with maturities of three months or less at the date of purchase. The carrying amounts of cash and cash equivalents on the consolidated balance sheets approximate fair value.

Other Current Assets and Other Current Liabilities

	December 31, 2017	December 31, 2016
Settlement deposits	$22,282	$10,496
Settlement receivables	30,063	14,327
Other	5,781	8,755
Total other current assets	$58,126	$33,578

	December 31, 2017	December 31, 2016
Settlement payables	$ 48,953	$24,016
Accrued interest	7,291	7,356
Vendor financed licenses	1,862	9,213
Royalties payable	9,264	7,197
Other	35,534	31,059
Total other current liabilities	$102,904	$78,841

Individuals and businesses settle their obligations to the Company's various clients, primarily utility and other public sector clients, using credit or debit cards or via ACH payments. The Company creates a receivable for the amount due from the credit or debit card company and an offsetting payable to the client. Once confirmation is received that the funds have been received, the Company settles the obligation to the client. Due to timing, in some instances, the Company may receive the funds into bank accounts controlled by and in the Company's name that are not disbursed to its clients by the end of the day resulting in a settlement deposit on the Company's books.

Off Balance Sheet Settlement Accounts

The Company also enters into agreements with certain clients to process payment funds on their behalf. When an automated clearing house or automated teller machine network payment transaction is processed, a transaction is initiated to withdraw funds from the designated source account and deposit them into a settlement account, which is a trust account maintained for the benefit of the Company's clients. A simultaneous transaction is initiated to transfer funds from the settlement account to the intended destination account. These "back to back" transactions are designed to settle at the same time, usually overnight, such that the Company receives the funds from the source at the same time as it sends the funds to their destination. However, due to the transactions being with various financial institutions there may be timing differences that result in float balances. These funds are maintained in accounts for the benefit of the client which is separate from the Company's corporate assets. As the Company does not take ownership of the funds, the settlement accounts are not included in the Company's balance sheet. The Company is entitled to interest earned on the fund balances. The collection of interest on these settlement accounts is considered in the Company's determination of its fee structure for clients and represents a portion of the payment for services performed by the Company. The amount of settlement funds as of December 31, 2017 and 2016 were $238.9 million and $270.0 million, respectively.

Property and Equipment

Property and equipment are stated at cost. Depreciation of these assets is generally computed using the straight-line method over their estimated useful lives based on asset class. As of December 31, 2017 and 2016, net property and equipment consisted of the following (in thousands):

	Useful Lives	2017	2016
Computer and office equipment	3 to 5 years	$ 123,804	$105,692
Leasehold improvements	Lesser of useful life of improvement or remaining life of lease	32,364	33,093
Furniture and fixtures	7 years	12,158	11,145
Building and improvements	7 - 30 years	12,651	10,391
Land	Non depreciable	1,785	1,785
		182,762	162,106
Less: accumulated depreciation and amortization		(102,534)	(83,156)
Property and equipment, net		$ 80,228	$ 78,950

Software

Software may be for internal use or available for sale. Costs related to certain software, which is available for sale, are capitalized in accordance with ASC 985-20, *Costs of Software to be Sold, Leased, or Marketed*, when the resulting product reaches technological feasibility. The Company generally determines technological feasibility when it has a detailed program design that takes product function, feature and technical requirements to their most detailed, logical form and is ready for coding. The Company does not typically capitalize costs related to software available for sale as technological feasibility generally coincides with general availability of the software.

Amortization of software costs to be sold or marketed externally, begins when the product is available for licensing to customers and is determined on a product-by-product basis. The annual amortization shall be the greater of the amount computed using (a) the ratio of current gross revenues for a product to the total of current and anticipated future gross revenues for that product or (b) the straight-line method over the remaining estimated economic life of the product, including the period being reported on. Due to competitive pressures, it may be possible that the estimates of anticipated future gross revenue or remaining estimated economic life of the software product will be reduced significantly. As a result, the carrying amount of the software product may be reduced accordingly. Amortization of internal-use software is generally computed using the straight-line method over estimated useful lives of three to ten years.

Business Combinations

The Company applies the provisions of ASC 805, *Business Combinations*, in the accounting for its acquisitions. It requires the Company to recognize separately from goodwill the assets acquired and the liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred and the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While the Company uses its best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, its estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, it records adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations.

Critical estimates in valuing certain intangible assets include but are not limited to future expected cash flows from customer relationships, covenants not to compete and acquired developed technologies, brand awareness and market position, as well as assumptions about the period of time the brand will continue to be used in our product portfolio, and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

Other estimates associated with the accounting for acquisitions may change as additional information becomes available regarding the assets acquired and liabilities assumed, as more fully discussed in Note 2, *Acquisitions*.

Fair Value

ASC 820, *Fair Value Measurements and Disclosures* (“ASC 820”), defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. ASC 820 establishes a fair value hierarchy for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

- Level 1 Inputs – Unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

- Level 2 Inputs – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, volatilities, prepayment speeds, credit risks, etc.) or inputs that are derived principally from or corroborated by market data by correlation or other means.

- Level 3 Inputs – Unobservable inputs for determining the fair values of assets or liabilities that reflect an entity’s own assumptions about the assumptions that market participants would use in pricing the assets or liabilities.

The fair value of the Company’s Credit Agreement approximates the carrying value due to the floating interest rate (Level 2 of the fair value hierarchy). The Company measures the fair value of its Senior Notes based on Level 2 inputs, which include quoted market prices and interest rate spreads of similar securities. The fair value of the Company’s Senior Notes was $305.7 million and $309.8 million at December 31, 2017 and December 31, 2016, respectively.

The fair values of cash and cash equivalents approximate the carrying values due to the short period of time to maturity (Level 2 of the fair value hierarchy).

Goodwill and Other Intangibles

In accordance with ASC 350, *Intangibles – Goodwill and Other*, the Company assesses goodwill for impairment at least annually. During this assessment management relies on a number of factors, including operating results, business plans and anticipated future cash flows. The Company assesses potential impairments to other intangible assets when there is evidence that events or changes in circumstances indicate that the carrying amount of an asset may not be recovered.

In accordance with ASC 350, the Company assesses goodwill for impairment annually during the fourth quarter of its fiscal year using October 1 balances or when there is evidence that events or changes in circumstances indicate that the carrying amount of the asset may not be recovered. The Company evaluates goodwill at the reporting unit level, and as discussed in Note 10, *Segment Information*, during the first quarter of 2017, it announced a change in organizational structure to better align with the Company’s strategic direction. This change in the Company’s operating segments also resulted in a change in reporting units to coincide with the new operating segments—ACI On Demand and ACI On Premise. The Company allocated goodwill to the new reporting units using a relative fair value approach with total goodwill of $909.7 million allocated $725.9 million to ACI On Premise and $183.8 million to ACI On Demand. In addition, the Company performed an assessment of potential goodwill impairment for all reporting units immediately prior to the reallocation and determined that no impairment was indicated.

The key assumptions used in the discounted cash flow valuation model include discount rates, growth rates, cash flow projections and terminal value rates. Discount rates, growth rates and cash flow projections are the most sensitive and susceptible to change as they require significant management judgment. Discount rates are determined by using a weighted average cost of capital (“WACC”). The WACC considers market and industry data as well as Company-specific risk factors. Operational management, considering industry and Company-specific historical and projected data, develops growth rates and cash flow projections for each reporting unit. Terminal value rate determination follows common methodology of capturing the present value of perpetual cash flow estimates beyond the last projected period assuming a constant WACC and low long-term growth rates. If the recoverability test indicates potential impairment, the Company calculates an implied fair value of goodwill for the reporting unit. The implied fair value of goodwill is determined in a manner similar to how goodwill is calculated in a business combination. If the implied fair value of goodwill exceeds the carrying value of goodwill assigned to the reporting unit, there is no impairment. If the carrying value of goodwill assigned to a reporting unit exceeds the implied fair value of the goodwill, an impairment charge is recorded to write down the carrying value. The calculated fair value substantially exceeded the current carrying value for all reporting units for all periods.

Other intangible assets, which include customer relationships and trademarks and trade names, are amortized using the straight-line method over periods ranging from three years to 20 years. The Company reviews its intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

Impairment of Long-Lived Assets

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of a long-lived asset group may not be recoverable. An impairment loss is recorded if the sum of the future cash flows expected to result from the use of the asset (undiscounted and without interest charges) is less than the carrying amount of the asset. The amount of the impairment charge is measured based upon the fair value of the asset group.

Treasury Stock

The Company accounts for shares of its common stock that are repurchased without intent to retire as treasury stock. Such shares are recorded at cost and reflected separately on the consolidated balance sheets as a reduction of stockholders' equity. The Company issues shares of treasury stock upon exercise of stock options, issuance of restricted share awards, payment of earned performance shares, and for issuances of common stock pursuant to the Company's employee stock purchase plan. For purposes of determining the cost of the treasury shares re-issued, the Company uses the average cost method.

Stock-Based Compensation Plans

In accordance with ASC 718, *Compensation – Stock Compensation*, the Company recognizes stock-based compensation costs for awards that are probable of vesting, on a straight-line basis over the requisite service period of the award, which is generally the vesting term. Share based compensation expense is recorded in operating expenses depending on where the respective individual's compensation is recorded. The Company generally utilizes the Black–Scholes option–pricing model to determine the fair value of stock options on the date of grant. In order to determine the grant date fair value of the supplemental stock options, a Monte Carlo simulation model is used. The assumptions utilized in the Black-Scholes and Monte Carlo simulation option-pricing models, as well as the description of the plans the stock-based awards are granted under, are described in further detail in Note 11, *Stock-Based Compensation Plans*.

Translation of Foreign Currencies

The Company's foreign subsidiaries typically use the local currency of the countries in which they are located as their functional currency. Their assets and liabilities are translated into U. S. dollars at the exchange rates in effect at the balance sheet date. Revenues and expenses are translated at the average exchange rates during the period. Translation gains and losses are reflected in the consolidated financial statements as a component of accumulated other comprehensive income (loss). Transaction gains and losses, including those related to intercompany accounts, that are not considered to be of a long-term investment nature are included in the determination of net income. Transaction gains and losses, including those related to intercompany accounts, that are considered to be of a long-term investment nature are reflected in the consolidated financial statements as a component of accumulated other comprehensive income (loss).

Income Taxes

The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company periodically assesses its tax exposures and establishes, or adjusts, estimated unrecognized tax benefits for probable assessments by taxing authorities, including the Internal Revenue Service ("IRS"), and various foreign and state authorities. Such unrecognized tax benefits represent the estimated provision for income taxes expected to ultimately be paid.

New Accounting Standards Recently Adopted

In January 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU 2017-04"), *Simplifying the Test for Goodwill Impairment*, an update that eliminates Step 2 from the goodwill impairment test. In computing the implied fair value of goodwill under Step 2, an entity had to perform procedures to determine the fair value at the impairment testing date of its assets and liabilities, including unrecognized assets and liabilities. Under the amendments in ASU 2017-04, an entity should perform its annual or interim goodwill test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. However, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. An entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. The standard is effective for annual or interim goodwill impairment tests in fiscal years beginning December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company has elected to early adopt these amendments in the fourth quarter of 2017. The adoption did not have an effect on the Company's financial position, results of operations, or cash flow as of and for the year-ended December 31, 2017.

In May 2017, the FASB issued ASU 2017-09, *Scope of Modification Accounting*, an update that provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting under ASC 718, *Compensation – Stock Compensation*. Under the amendments in ASU 2017-09, an entity should account for the effects of a modification unless all of the following criteria are met: 1) the fair value of the modified award is the same as the fair value of the original award immediately before the original award is modified - if the modification does not affect any of the inputs to the valuation technique that the entity uses to value the award, the entity is not required to estimate the value immediately before and after the modification; 2) the vesting conditions of the modified award are the same as the conditions of the original award immediately before the original award is modified; 3) the classification of the modified award as an equity instrument or a liability instrument is the same as the classification of the original award immediately before the original award is modified. The standard is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2017. Early adoption is permitted, including adoption in any interim period for which financial statements have not yet been issued. The Company has elected to early adopt these amendments prospectively in the second quarter of 2017. The adoption did not have a material effect on the Company's financial position, results of operations, or cash flow as of and for the year-ended December 31, 2017.

Recently Issued Accounting Standards Not Yet Effective

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* (codified as "ASC 606"). ASC 606 supersedes the revenue recognition requirements in Accounting Standard Codification 605, *Revenue Recognition*, and most industry-specific guidance. The standard requires that entities recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which a company expects to be entitled in exchange for those goods or services. On July 9, 2015, the FASB deferred the effective date to fiscal years beginning after December 15, 2017, and for interim periods within those fiscal years. The standard permits the use of either the retrospective or modified retrospective transition method.

The Company will adopt ASC 606 on January 1, 2018 using the modified retrospective transition method which requires an adjustment to retained earnings for the cumulative effect of applying ASC 606 to active contracts as of the adoption date. During the first quarter of 2018, the Company will record its cumulative adjustment to retained earnings. As the modified retrospective transition method does not result in recast of the prior year financial statements, ASC 606 requires the Company to provide additional disclosures during the year of adoption for the amount by which each financial statement line item is affected by adoption of the standard and explanation of the reasons for significant changes. These disclosures will be included in the notes to the Company's consolidated financial statements included in each of its quarterly reports on Form 10-Q and on annual report Form 10-K for the year ending December 31, 2018.

The most significant ongoing impact from the adoption of ASC 606 relates to the changes in the timing and amount of recognition for software license revenues and sales commission expenses.

As it relates to software license revenues, under ASC 606 the Company will recognize revenue in advance of billings (i.e. accrued receivables) for certain software license arrangements with extended payment terms as opposed to when payments become due and payable. Additionally, certain of those same software license arrangements will contain a significant financing component which will result in a change in the amount of the contract value that is allocated to software license revenue. The adjustment to the transaction price attributable to the significant financing component will be presented as an adjustment to the accrued receivable (i.e. net accrued receivable) and recognized as interest income over the term of the contract. Because the requirement to have vendor-specific objective evidence of fair value for undelivered elements is eliminated under ASC 606, the Company expects the amounts allocated to software license, maintenance, and services revenues for most software license arrangements to be recognized as each element is delivered or provided to the customer. Under current U.S. GAAP, when software license arrangements include PCS terms that fail to achieve VSOE of fair value, the Company recognizes all revenues in the arrangement ratably over the longer service period. The Company's cumulative adjustment to retained earnings is primarily comprised of the net accrued receivables arising from active software license arrangements with extended payment terms. Based on currently available information, the Company expects pre-tax retained earnings to increase approximately $273 million - $291 million as a result of this component of the cumulative transition adjustment.

The Company has determined that certain of its sales commissions meet the definition of incremental costs of obtaining a contract. Accordingly, the costs associated with those sales commissions will be capitalized and expense recognized as the related goods or services are transferred to the customer. Under current U.S. GAAP, the Company currently recognizes sales commission expenses as they are incurred. The Company is finalizing this component of its cumulative transition adjustment.

The Company's SaaS-based and Platform-based arrangements represent a single promise to provide continuous access (i.e. a stand-ready obligation) to its software solutions and their processing capabilities in the form of a service through one of the Company's data centers. As each day of providing access to the software solution(s) is substantially the same and the customer simultaneously receives and consumes the benefits as access is provided, the Company has determined that its SaaS-based and Platform-based arrangements include a single performance obligation comprised of a series of distinct services. The Company's SaaS-based and Platform-based arrangements may include fixed consideration, variable consideration or a combination of the two. Variable consideration in these arrangements is typically a function of a tier-based pricing structure that provides that customer with levels of transaction volume that "reset" with varying frequencies (e.g. monthly, quarterly or annually) and the corresponding rate per transaction within each level. Depending upon the structure of a particular arrangement, the Company will either: (1) allocate the variable amount to each distinct service period within the series and recognize revenue as each distinct service period is performed (i.e. direct allocation), (2) estimate total variable consideration at contract inception (giving consideration to any constraints that may apply) and recognize the total transaction price over the period to which it relates, or (3) apply 'right to invoice' practical expedient. The Company believes that revenue from most of its SaaS-based and Platform-based arrangements will be recognized under the direct allocation method or by applying the 'right to invoice' practical expedient, which will result in the same pattern of recognition as under current U.S. GAAP.

In February 2016, the FASB issued ASU 2016-02, *Leases*, codified as ASC 842. This standard requires a lessee to record on the balance sheet the assets and liabilities for the rights and obligations created by leases with lease terms of more than 12 months. In addition, this standard requires both lessees and lessors to disclose certain key information about lease transactions. This standard will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company will adopt the standard effective January 1, 2019. During the year-ended December 31, 2017, the Company began its detailed assessment of the impact of ASC 842. While the Company continues to evaluate the impact of the standard on its consolidated financial statements and related disclosures, at this time the Company cannot estimate the quantitative impact of adopting the new standard.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows – Classification of Certain Cash Receipts and Cash Payments*, an update that addresses how certain cash receipts and cash payments are presented and classified in the statement of cash flows. Among the cash flow matters addressed in the update are payments for costs related to debt prepayments or extinguishments, payments related to settlement of certain types of debt instruments, payments of contingent consideration made after a business combination, proceeds from insurance claims and corporate-owned life insurance policies, and distributions received from equity method investees, among others. The standard is effective for fiscal year beginning after December 31, 2017, including interim periods within that fiscal year. Early adoption is permitted, including adoption in an interim period. If an entity early adopts the amendments in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes that interim period, and all of the amendments must be adopted together in the same period. The amendments will be applied using a retrospective transition method to each period presented, unless impracticable for specific cash flow matters, in which case the amendments would be applied prospectively as of the earliest date practicable. The Company does not expect the impact of ASU 2016-15 to be material to its consolidated statement of cash flows.

In October 2016, the FASB issued ASU 2016-16, *Intra-Entity Transfers of Assets Other than Inventory*, to simplify the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. Currently, U.S. GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. This prohibition on recognition is an exception to the principle of comprehensive recognition of current and deferred income taxes in U.S. GAAP. The limited amount of authoritative guidance about the exception has led to diversity in practice and is a source of complexity in financial reporting, particularly for an intra-entity transfer of intellectual property. Under the amendments of ASU 2016-16, an entity should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. Consequently, this amendment eliminates the exception for an intra-entity transfer of an asset other than inventory. The standard is effective for fiscal year beginning after December 15, 2017, including interim reporting periods within that fiscal year. Early adoption is permitted as of the beginning of an annual reporting period for which financial statements have not been issued or made available for issuance. The amendments to this ASU should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. The Company is currently assessing the impact of ASU 2016-16 on its financial position, results of operations, and cash flow.

2. Acquisitions

Fiscal 2015 Acquisitions

PAY.ON

On November 4, 2015, the Company completed the acquisition of PAY.ON for $186.1 million in cash and stock. PAY.ON is a leader in eCommerce payments gateway solutions to payment service providers globally. Their advanced Platform-based solution complements and strengthens the Company’s Merchant Retail Omni-Channel Universal Payments offerings. The combined entities provides customers the ability to deliver a seamless omni-channel customer payment experience in store, mobile, and online.

Under the terms of the agreement, the Company acquired 100% of the equity of PAY.ON in a combination of cash and stock. The Company used approximately $181.0 million from its Revolving Credit Facility. See Note 5, *Debt*, for terms of the Credit Facility.

The purchase price of PAY.ON was comprised of (in thousands):

	Amount
Cash payments to PAY.ON shareholders	$180,994
Issuance of ACI common stock	5,379
Working capital adjustment	(232)
Total purchase price	$186,141

The aggregate purchase price of PAY.ON was $186.1 million, after working capital adjustments in accordance with the terms of the acquisition agreement. The consideration paid by the Company has been allocated to specific assets and liabilities based on the relative fair value of all assets and liabilities.

The Company incurred approximately $0.9 million in transaction related expenses during the year-ended December 31, 2015, including fees to the investment bank, legal and other professional fees, which are included in general and administrative expenses in the accompanying consolidated financial statements.

Under the terms of the PAY.ON acquisition agreement, the Company issued 476,750 shares of ACI common stock to two key PAY.ON employees ("PAY.ON RSAs") with a fair value of $11.3 million on the date of grant. The awards have requisite service periods of two years and vest in increments of 25% every six months from the date of the acquisition. The PAY.ON RSA grants provide for the payment of dividends on the Company's common stock, if any, to the participant during the requisite service period (vesting period) and the participant has voting rights for each share of common stock. The Company recognizes compensation expense for the PAY.ON RSAs on a straight-line basis over the requisite service period.

PAY.ON contributed approximately $16.5 million and $2.9 million in revenue and an operating loss of $17.1 million and $2.1 million for the years ended December 31, 2016 and 2015, respectively.

In connection with the acquisition, the Company recorded the following amounts based upon its purchase price allocation as of December 31, 2016.

(in thousands, except weighted average useful lives)	Weighted-Average Useful Lives	PAY.ON
Current assets:		
Cash and cash equivalents		$ 1,627
Receivables		2,649
Other current assets		502
Total current assets acquired		4,778
Noncurrent assets:		
Property and equipment		332
Goodwill		140,526
Software	5 years	34,150
Customer relationships	15 years	21,718
Trademarks	5 years	2,300
Other noncurrent assets		28
Total assets acquired		203,832
Current liabilities:		
Accounts payable		1,058
Employee compensation		681
Other current liabilities		866
Total current liabilities acquired		2,605
Noncurrent liabilities:		
Deferred income taxes		15,086
Total liabilities acquired		17,691
Net assets acquired		$186,141

Factors contributing to the purchase price that resulted in the goodwill (which is not tax deductible) include the acquisition of management, sales, and technology personnel with the skills to market new and existing products of the Company, enhanced product capabilities, complementary products and customers. Pro forma results for PAY.ON are not presented because they are not material.

3. Divestiture

Community Financial Services

On March 3, 2016, the Company completed the sale of its Community Financial Services ("CFS") related assets and liabilities to Fiserv, Inc. ("Fiserv") for $200.0 million. The sale of CFS, which was not strategic to the Company's long-term strategy, is part of the Company's ongoing efforts to expand as a provider of software products, Software as a Service-based, and platform-based solutions facilitating real-time electronic and eCommerce payments for large banks, financial intermediaries, merchants, and corporates worldwide. The sale included employee agreements and customer contracts as well as technology assets and intellectual property.

For the year-ended December 31, 2016, the Company recognized a net after-tax gain of $93.4 million on the sale of assets to Fiserv. This gain includes final post-closing adjustments pursuant to the definitive transaction agreement of $0.5 million recognized during the year-ended December 31, 2016.

The Company and Fiserv have also entered into a Transition Services Agreement ("TSA"), whereby the Company continues to perform certain functions on Fiserv's behalf during a migration period. The TSA is meant to reimburse the Company for direct costs incurred in order to provide such functions, which are no longer generating revenue for the Company.

4. Software and Other Intangible Assets

At December 31, 2017, software net book value totaled $155.4 million, net of $230.7 million of accumulated amortization. Included in this amount is software marketed for external sale of $40.9 million. The remaining software net book value of $114.5 million is comprised of various software that has been acquired or developed for internal use.

At December 31, 2016, software net book value totaled $185.5 million, net of $195.0 million of accumulated amortization. Included in this amount is software marketed for external sale of $52.3 million. The remaining software net book value of $133.2 million is comprised of various software that has been acquired or developed for internal use.

Amortization of software marketed for external sale is computed using the greater of the ratio of current revenues to total current and anticipated revenues expected to be derived from the software or the straight-line method over an estimated useful life of generally three to ten years. Software for resale amortization expense recorded during the years ended December 31, 2017, 2016, and 2015, totaled $12.8 million, $13.9 million, and $14.5 million, respectively. These software amortization expense amounts are reflected in cost of revenue in the consolidated statements of operations.

Amortization of software for internal use is computed using the straight-line method over an estimated useful life of three to ten years. Software for internal use amortization expense recorded during the years ended December 31, 2017, 2016, and 2015, totaled $45.2 million, $45.7 million, and $38.3 million, respectively. These software amortization expense amounts are reflected in depreciation and amortization in the consolidated statements of operations.

The carrying amount and accumulated amortization of the Company's other intangible assets that were subject to amortization at each balance sheet date are as follows (in thousands):

	December 31, 2017			December 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net Balance	Gross Carrying Amount	Accumulated Amortization	Net Balance
Customer relationships	$305,218	$ (116,677)	$188,541	$295,730	$ (96,356)	$199,374
Trademarks and tradenames	16,646	(13,906)	2,740	16,019	(11,759)	4,260
	$321,864	$(130,583)	$191,281	$311,749	$(108,115)	$203,634

Other intangible assets amortization expense recorded during the years ended December 31, 2017, 2016, and 2015, totaled $19.4 million, $21.2 million, and $23.0 million, respectively.

Based on capitalized intangible assets at December 31, 2017, and assuming no impairment of these intangible assets, estimated amortization expense amounts in future fiscal years are as follows (in thousands):

Fiscal Year Ending December 31,	Software Amortization	Other Intangible Assets Amortization
2018	$ 49,012	$ 19,145
2019	40,471	18,587
2020	31,550	17,688
2021	19,734	17,176
2022	8,383	17,015
Thereafter	6,236	101,670
Total	$ 155,386	$ 191,281

5. Debt

As of December 31, 2017, the Company had $2.0 million, $394.3 million, and $300.0 million outstanding under its Revolving Credit Facility, Term Credit Facility, and Senior Notes, respectively, with up to $498.0 million of unused borrowings under the Revolving Credit Facility portion of the Credit Agreement, as amended.

Credit Agreement

On February 24, 2017, the Company entered into an amended and restated credit agreement (the "Credit Agreement"), replacing the existing agreement, with a syndicate of financial institutions, as lenders, and Bank of America, N.A. ("BofA"), as Administrative Agent, providing for revolving loans, swingline loans, letters of credit, and a term loan. The Credit Agreement consists of a five-year $500.0 million senior secured revolving credit facility (the "Revolving Credit Facility"), which includes a sublimit for the issuance of standby letters of credit and a sublimit for swingline loans, and $415.0 million under the five-year senior secured term loan facility (the "Term Credit Facility" and, together with the Revolving Credit Facility, the "Credit Facility"). The Credit Agreement also allows the Company to request optional incremental term loans and increases in the revolving commitment.

The loans under the Credit Facility may be made to, and the letters of credit under the Revolving Credit Facility may be issued on behalf of the Company. On February 24, 2017, the Company borrowed an aggregate principal amount of $12.0 million under the Revolving Credit Facility and borrowed $415.0 million under the Term Credit Facility.

Borrowings under the Credit Facility bear interest at a rate per annum equal to, at the Company's option, either (a) a base rate determined by reference to the highest of (1) the rate of interest per annum publicly announced by the Administrative Agent as its Prime Rate, (2) the federal funds effective rate plus 1/2 of 1% and (3) a LIBOR rate determined by reference to the costs of funds for U.S. dollar deposits for a one-month interest period adjusted for certain additional costs plus 1% or (b) a LIBOR rate determined by reference to the costs of funds for U.S. dollar deposits for the interest period relevant to such borrowing adjusted for certain additional costs, in each case plus an applicable margin. The applicable margin for borrowings under the Credit Facility is, based on the calculation of the applicable consolidated total leverage ratio, between 0.25% to 1.25% with respect to base rate borrowings and between 1.25% and 2.25% with respect to LIBOR rate borrowings. Interest is due and payable monthly. The interest rate in effect at December 31, 2017 for the Credit Facility was 3.07%.

In addition to paying interest on the outstanding principal under the Credit Facility, the Company is required to pay a commitment fee in respect of the unutilized commitments under the Revolving Credit Facility, payable quarterly in arrears. The Company is also required to pay letter of credit fees on the maximum amount available to be drawn under all outstanding letters of credit in an amount equal to the applicable margin on LIBOR rate borrowings under the Revolving Credit Facility on a per annum basis, payable quarterly in arrears, as well as customary fronting fees for the issuance of letters of credit fees and agency fees.

The Company's obligations under the Credit Facility and cash management arrangements entered into with lenders under the Credit Facility (or affiliates thereof) and the obligations of the subsidiary guarantors are secured by first-priority security interests in substantially all assets of the Company and any guarantor, including 100% of the capital stock of ACI Worldwide Corp. and each domestic subsidiary of the Company, each domestic subsidiary of any guarantor, and 65% of the voting capital stock of each foreign subsidiary of the Company that is directly owned by the Company or a guarantor, in each case subject to certain exclusions set forth in the credit documentation governing the Credit Facility.

The Credit Agreement contains a number of covenants that, among other things and subject to certain exceptions, restrict the Company's ability and, as applicable, the ability of its subsidiaries to: create, incur, assume or suffer to exist any additional indebtedness; create, incur, assume or suffer to exist any liens; enter into agreements and other arrangements that include negative pledge clauses; pay dividends on capital stock or redeem, repurchase or retire capital stock or subordinated indebtedness; create restrictions on the payment of dividends or other distributions by subsidiaries; make investments, loans, advances and acquisitions; merge, consolidate or enter into any similar combination or sell assets, including equity interests of the subsidiaries; enter into sale and leaseback transactions; directly or indirectly engage in transactions with affiliates; alter in any material respect the character or conduct of the business; enter into amendments of or waivers under subordinated indebtedness, organizational documents and certain other material agreements; and hold certain assets and incur certain liabilities.

The Credit Agreement also contains certain customary affirmative covenants and events of default. If an event of default, as specified in the Credit Agreement, shall occur and be continuing, the Company may be required to repay all amounts outstanding under the Credit Facility.

Letter of Credit

On February 29, 2016, the Company entered into a standby letter of credit (the "Letter of Credit"), under the terms of the Credit Agreement, for $25.0 million. On October 26, 2016, the Letter of Credit was renewed at $7.5 million. On June 15, 2017, the Letter of Credit was renewed at $5.0 million. The Company cancelled the Letter of Credit on August 24, 2017.

Senior Notes

On August 20, 2013, the Company completed a $300.0 million offering of Senior Notes ("Senior Notes") at an issue price of 100% of the principal amount in a private placement for resale to qualified institutional buyers. The Senior Notes bear an interest rate of 6.375% per annum, payable semi-annually in arrears on August 15 and February 15 of each year, commencing on February 15, 2014. Interest began accruing beginning August 20, 2013. The Senior Notes will mature on August 20, 2020.

Maturities on long-term debt outstanding at December 31, 2017 are as follows (amounts in thousands):

Fiscal year ending December 31, (in thousands)	
2018	$ 20,750
2019	31,125
2020	331,125
2021	41,500
2022	271,750
Total	$696,250

The Credit Agreement and Senior Notes also contain certain customary mandatory prepayment provisions. If certain events, as specified in the Credit Agreement or Senior Notes agreement, shall occur, the Company may be required to repay all or a portion of the amounts outstanding under the Credit Facility or Senior Notes.

The Credit Facility will mature on February 24, 2022 and the Senior Notes will mature on August 15, 2020. The Revolving Credit Facility and Senior Notes do not amortize and the Term Credit Facility does amortize, with principal payable in consecutive quarterly installments.

The Credit Agreement and Senior Notes contain certain customary affirmative covenants and negative covenants that limit or restrict, subject to certain exceptions, the incurrence of liens, indebtedness of subsidiaries, dividends and other restricted payments, mergers, advances, investments, acquisitions, transactions with affiliates, change in nature of business, and the sale of the assets. The Company is also required to maintain a consolidated leverage ratio at or below a specified amount and a consolidated fixed charge coverage ratio at or above a specified amount. If an event of default, as specified in the Credit Agreement and Senior Notes agreement, shall occur and be continuing, the Company may be required to repay all amounts outstanding under the Credit Facility and Senior Notes. On June 27, 2017, the Company and the Administrative Agent entered into an amendment to the Credit Agreement. The amendment revised the definition of "Consolidated EBITDA" to exclude the expense from the BHMI judgment and related fees, expenses, and interest thereto, up to $50.0 million from the calculation in the period recorded. As of December 31, 2017, and at all times during the period, the Company was in compliance with its debt covenants.

Total debt is comprised of the following (in thousands):

(in thousands)	As of December 31, 2017	As of December 31, 2016
Term credit facility	$ 394,250	$ 365,290
Revolving credit facility	2,000	88,000
6.375% Senior Notes, due August 2020	300,000	300,000
Debt issuance costs	(10,521)	(9,372)
Total debt	685,729	743,918
Less current portion of term credit facility	20,750	95,293
Less current portion of debt issuance costs	(2,964)	(4,970)
Total long-term debt	$ 667,943	$ 653,595

Other

During the year-ended December 31, 2015, the Company financed multiple three-year license agreements for certain internally-used software for a total value of $20.4 million with payments due through November 2018. Of these amounts, $1.9 million and $9.0 million remained outstanding at December 31, 2017 and 2016, respectively. The Company recorded $1.5 million and $7.3 million in other current liabilities and $0.4 million and $1.7 million in other non-current liabilities in its consolidated balance sheets as of December 31, 2017 and 2016, respectively.

6. Corporate Restructuring and Other Organizational Changes

Employee Actions

During the year-ended December 31, 2016, the Company paid approximately $0.8 million of termination costs related to terminations in prior periods. The Company had no severance liability outstanding at December 31, 2017 or 2016.

During the year-ended December 31, 2015, the Company reduced its headcount by 30 employees as a part of its integration of recent acquisitions. In connection with these actions, approximately $1.3 million of termination costs were recognized in general and administrative expense in the accompanying consolidated statements of operations during the year-ended December 31, 2015. The Company paid approximately $2.9 million in restructuring severance costs during the year-ended December 31, 2015 relating to expenses incurred in 2015 and prior. The unpaid severance liability as of December 31, 2015 totaled $0.8 million.

Lease Terminations

During the year-ended December 31, 2017, the Company ceased use of a portion of its leased facilities in Edison, NJ; Chantilly, VA; Charlotte, SC; Parsippany, PA; and Waltham, MA. As a result, the Company recorded additional expense of $2.4 million, which was recorded in general and administrative expenses in the accompanying consolidated statements of operations for the year-ended December 31, 2017.

During the year-ended December 31, 2016, the Company ceased use of a portion of its leased facilities in Watford, U.K.; Providence, RI; Chantilly, VA; and West Hills, CA. As a result, the Company recorded additional expense of $5.0 million, which was recorded in general and administrative expenses in the accompanying consolidated statements of operations for the year-ended December 31, 2016.

The components of corporate restructuring and other reorganization activities from the recent acquisitions are included in the following table (in thousands):

	Severance	Facility Closures	Total
Balance, December 31, 2015	$ 777	$ 268	$ 1,045
Restructuring charges (adjustments) incurred, net	—	5,041	5,041
Amounts paid during the period	(778)	(654)	(1,432)
Foreign currency translation adjustments	1	(96)	(95)
Balance, December 31, 2016	$ —	$ 4,559	$ 4,559
Restructuring charges (adjustments) incurred, net	—	2,447	2,447
Amounts paid during the period	—	(1,285)	(1,285)
Foreign currency translation adjustments	—	224	224
Balance, December 31, 2017	$ —	$ 5,945	$ 5,945

Of the $5.9 million facility closure liability, $1.8 million and $4.1 million is recorded in other current and noncurrent liabilities, respectively, in the accompanying consolidated balance sheet at December 31, 2017.

7. Common Stock and Treasury Stock

As of September 12, 2012, the Company's Board of Directors ("the Board") had approved a stock repurchase program authorizing the Company, from time to time as market and business conditions warrant, to acquire up to $262.1 million of its common stock. On September 13, 2012, the Board approved the repurchase of up to 7,500,000 shares of the Company's common stock, or up to $113.0 million, in place of the remaining repurchase amounts previously authorized. In July 2013 and again in February 2014, the Board approved an additional $100.0 million for the stock repurchase program for a total of an additional $200.0 million.

The Company repurchased 1,653,573 shares for $37.4 million under the program during the year-ended December 31, 2017. Under the program to date, the Company has repurchased 41,782,966 shares for approximately $493.3 million. The maximum remaining authorized for purchase under the stock repurchase program was approximately $40.8 million as of December 31, 2017.

Subsequent to December 31, 2017, the Company repurchased an additional 1,346,427 shares for $31.1 million under the repurchase program leaving a maximum of $9.7 million authorized for repurchases. On February 19, 2018, the Board of Directors approved $200.0 million for the stock repurchase program.

During the year-ended September 30, 2006, the Company began to issue shares of treasury stock upon exercise of stock options, payment of earned performance shares, issuance of restricted stock awards, and for issuances of common stock pursuant to the Company's employee stock purchase plan. Treasury shares issued during the year-ended December 31, 2015 included 1,146,199, 125,026, 548,671, and 978,365 shares issued pursuant to stock option exercises, RSA grants, LTIP Performance Shares vesting, and PBRSA grants, respectively. Treasury shares issued during the year-ended December 31, 2016 included 797,140, 148,322, and 470,029 shares issued pursuant to stock option exercises, RSA grants, and Retention Restricted Share Award ("Retention RSA") grants, respectively. Treasury shares issued during the year-ended December 31, 2017 included 1,204,559 and 560,174 shares issued pursuant to stock option exercises and RSA grants, respectively.

8. Earnings Per Share

Earnings per share is computed in accordance with ASC 260, *Earnings per Share*. Basic earnings per share is computed on the basis of weighted average outstanding common shares. Diluted earnings per share is computed on the basis of basic weighted average outstanding common shares adjusted for the dilutive effect of stock options and other outstanding dilutive securities.

The following table reconciles the average share amounts used to compute both basic and diluted earnings per share (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Weighted average shares outstanding:			
Basic weighted average shares outstanding	118,059	117,533	117,465
Add: Dilutive effect of stock options	1,385	1,314	1,454
Diluted weighted average shares outstanding	119,444	118,847	118,919

For the years ended December 31, 2017, 2016, and 2015, respectively, 3.9 million, 6.1 million, and 3.7 million, options to purchase shares and contingently issuable shares, were excluded from the diluted earnings per share computation as their effect would be anti-dilutive.

Common stock outstanding as of December 31, 2017 and 2016 was 117,096,731 and 117,336,797, respectively.

9. Other, net

Other, net is comprised of the following items (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Foreign currency transaction gains (losses)	$(2,619)	$4,105	$ 1,946
Realized gain on available-for-sale securities	—	—	24,465
Total	$(2,619)	$4,105	$26,411

The Company acquired a cost basis investment in Yodlee, Inc. ("Yodlee") with the acquisition of S1 Corporation ("S1") in February of 2012, which was fair valued at $9.8 million as a part of the purchase price allocation. The Company subsequently made an additional investment in Yodlee of approximately $1.0 million, bringing the total investment to $10.8 million as of December 31, 2013. On October 3, 2014 Yodlee common stock began trading on the NASDAQ under the symbol YDLE and the Company transitioned to accounting for the investment as available-for-sale securities.

During the year-ended December 31, 2015, the Company sold all of its Yodlee stock holdings in a series of sales and realized a total gain of $24.5 million, which is included in other, net in the accompanying consolidated statements of operations.

10. Segment Information

In January 2017, the Company announced a change in organizational structure to align with its strategic direction. As a result, beginning January 1, 2017, the Company reports financial performance based on its segments, ACI On Premise and ACI On Demand, and analyzes operating income as a measure of segment profitability.

The Company's chief operating decision maker ("CODM"), which is also our Chief Executive Officer focuses his review of consolidated financial information and the allocation of resources based upon the operating results, including revenues and operating income, for the segments ACI On Premise and ACI On Demand, separate from the Corporate operations.

ACI On Premise serves customers who manage their software on site. These on-premise customers use the Company's software to develop sophisticated, custom solutions, which are often part of a larger system located and managed at the customer site. These customers require a level of control, customization, and flexibility that ACI On Premise solutions can offer, and they have the resources and expertise to take a lead role in managing these solutions.

ACI On Demand serves the needs of banks, financial intermediaries, merchants, and corporates who use payments to facilitate their core business. The Company sees an increasing number of customers opting for software as a service and platform as a service offerings, which offer reduced complexity and cost as well as the ability to rapidly implement and scale.

Revenue is attributed to the reportable segments based upon the product sold and mechanism for delivery to the customer. Expenses are attributed to the reportable segments in one of three methods, (1) direct costs of the segment, (2) labor costs that can be attributed based upon time tracking for individual products, or (3) costs that are allocated. Allocated costs are generally marketing and sales related activities as well as information technology and facilities related expense for which multiple segments benefit. The Company also allocates certain depreciation costs to the segments.

Corporate and other consists of the corporate overhead costs that are not allocated to reportable segments. These overhead costs relate to human resources, finance, legal, accounting, merger and acquisition activity, amortization of acquisition-related intangibles, and other costs that are not considered when management evaluates segment performance. For the year-ended December 31, 2017, Corporate and other includes $46.7 million of general and administrative expense for the legal judgment discussed in Note 14. For the year-ended December 31, 2016, Corporate and other also includes revenue and operating income from the operations and sale of CFS related assets and liabilities of $15.4 million and $151.7 million, respectively.

The following is selected financial data for the Company's reportable segments for the periods indicated (in thousands):

	Years Ended December 31, 2017	2016
Revenues:		
ACI On Premise	$ 598,590	$ 591,252
ACI On Demand	425,601	399,033
Corporate and other	—	15,416
	$1,024,191	$1,005,701
Depreciation and amortization expense:		
ACI On Premise	$ 13,094	$ 14,581
ACI On Demand	34,171	29,385
Corporate and other	54,959	59,488
	$102,224	$103,454
Stock-based compensation expense:		
ACI On Premise	$ 2,234	$ 6,894
ACI On Demand	2,230	6,876
Corporate and other	9,219	29,843
	$ 13,683	$ 43,613
Operating income (loss):		
ACI On Premise	$ 331,766	$ 290,713
ACI On Demand	(38,233)	(38,885)
Corporate and other	(208,893)	(30,698)
	$ 84,640	$ 221,130

As a result of the significant changes associated with the reorganization, which were implemented on a prospective basis only, as well as the changes in the Company through the PAY.ON acquisition that occurred late in 2015 and the CFS divestiture in 2016, ACI does not have all of the information that would be necessary to present segment data for 2015 under the new operating segments structure for operating expenses and results. The Company, likewise, does not have the necessary information to present the 2017 results under the prior segment view. This information is not available to management of the Company for its own internal use and it is impractical to obtain or generate the information. The Corporate and other segment includes revenue from the operations of CFS. Revenue for the year-ended December 31, 2015 under the new operating segments is as follows (in thousands):

	Year Ended December 31, 2015
Revenue:	
ACI On Premise	$ 589,006
ACI On Demand	362,368
Corporate and other	94,603
	$ 1,045,977

Prior to the reorganization, the Company's CODM, together with other senior management personnel, focused their review of consolidated financial information and the allocation of resources based on reporting of operating results, including revenues and operating income for the geographic regions of the Americas, Europe/Middle East/Africa ("
EMEA"), and Asia/Pacific. The Company's products were sold and supported through distribution networks covering these three geographic regions, with each distribution network having its own sales force. The Company supplemented its distribution networks with independent reseller and/or distributor arrangements. All administrative costs not directly attributable or reasonably allocable to a geographic segment were tracked in Corporate.

The Company allocated segment support expenses such as global product development, business operations, and product management based upon percentage of revenue per segment. Depreciation and amortization and other facility related costs were allocated as a percentage of the headcount by segment. The Corporate line item consisted of the corporate overhead costs that were not allocated to operating segments. Corporate overhead costs related to human resources, finance, legal, accounting, merger and acquisition activity, and amortization of acquisition-related intangibles and software as well as other costs that were not considered when management evaluates segment performance.

The following is selected segment financial data under the previous operating segments for the periods indicated (in thousands):

	Years Ended December 31, 2016	2015
Revenues:		
Americas - United States	$ 527,431	$ 628,013
Americas - Other	116,718	82,548
EMEA	261,160	250,568
Asia/Pacific	100,392	84,848
	$1,005,701	$1,045,977
Depreciation and amortization expense:		
Americas	$ 27,951	$ 24,966
EMEA	3,830	3,670
Asia/Pacific	1,820	1,751
Corporate	69,853	67,044
	$ 103,454	$ 97,431
Stock-based compensation expense:		
Americas	$ 5,005	$ 1,638
EMEA	6,476	1,223
Asia/Pacific	605	36
Corporate	31,527	15,483
	$ 43,613	$ 18,380
Income (loss) before income taxes:		
Americas	$ 206,689	$ 111,382
EMEA	176,958	132,518
Asia/Pacific	62,422	41,658
Corporate	(260,488)	(172,185)
	$ 185,581	$ 113,373

Assets are not allocated to segments and the Company’s CODM does not evaluate operating segments using discrete asset information.

The following is selected financial data for the Company’s geographical areas for the periods indicated (in thousands):

	Years Ended December 31, 2017	2016	2015
Revenues:			
United States	$ 541,235	$ 527,431	$ 628,013
Other	482,956	478,270	417,964
	$1,024,191	$1,005,701	$1,045,977

	As of December 31, 2017	2016
Long lived assets		
United States	$ 759,513	$ 752,442
Other	613,556	664,383
	$1,373,069	$1,416,825

Additionally, the Company offers six primary solution categories that are sold in each of the geographic regions listed above. Following are revenues, by product and services (in thousands):

	Years Ended December 31, 2017	2016	2015
Retail payments	$ 428,583	$ 422,262	$ 416,998
Bill payments	271,421	255,540	241,949
Digital channels	94,036	124,630	219,698
Payments risk management	80,326	67,649	66,386
Merchant payments	76,953	64,626	49,064
Real time payments	72,872	70,994	51,882
Total	$1,024,191	$1,005,701	$1,045,977

During the years ended December 31, 2017, 2016, and 2015, approximately 19%, 22%, and 21%, respectively, of the Company's total revenues were derived from licensing the BASE24 product line, which does not include the BASE24-eps product, and providing related services and maintenance. Digital Channels revenue includes $15.3 million and $94.5 million from CFS-related assets for the years-ended December 31, 2016 and 2015, respectively.

No single customer accounted for more than 10% of the Company's consolidated revenues during the years ended December 31, 2017, 2016, and 2015. No other country outside the United States accounted for more than 10% of the Company's consolidated revenues during the years ended December 31, 2017, 2016, and 2015.

11. Stock-Based Compensation Plans

Employee Stock Purchase Plan

On April 6, 2017, the Board of Directors approved the 2017 Employee Stock Purchase Plan ("2017 ESPP"), which was approved by shareholders at the 2017 Annual Shareholder meeting. The 2017 ESPP provides employees with an opportunity to purchase shares of Common Stock in the Company. The 1999 Employee Stock Purchase Plan terminated upon the August 1, 2017 effective date of the 2017 ESPP. Under the Company's 2017 ESPP a total of 3,000,000 shares of the Company's common stock have been reserved for issuance to eligible employees. Participating employees are permitted to designate up to the lesser of $25,000 or 10% of their annual base compensation, for the purchase of common stock under the ESPP. Purchases under the ESPP are made one calendar month after the end of each fiscal quarter. The price for shares of common stock purchased under the ESPP is 85% of the stock's fair market value on the last business day of the three-month participation period. Shares issued under the ESPP during the years ended December 31, 2017, 2016, and 2015, totaled 158,194, 188,453, and 162,058, respectively.

Additionally, the discount offered pursuant to the Company's ESPP discussed above is 15%, which exceeds the 5% non-compensatory guideline in ASC 718 and exceeds the Company's estimated cost of raising capital. Consequently, the entire 15% discount to employees is deemed to be compensatory for purposes of calculating expense using a fair value method. Compensation costs related to the ESPP for each of the years ended December 31, 2017, 2016, and 2015, was approximately $0.5 million.

Stock Incentive Plans – Active Plans

2016 Equity and Performance Incentive Plan

On March 23, 2016, the Board approved the 2016 Equity and Performance Incentive Plan (the "2016 Incentive Plan"). The 2016 Incentive Plan is intended to meet the Company's objective of balancing stockholder concerns about dilution with the need to provide appropriate incentives to achieve Company performance objectives. The 2016 Incentive Plan was adopted by the stockholders on June 14, 2016. Following the adoption of the 2016 Incentive Plan, the 2005 Equity and Performance Incentive Plan, as amended (the "2005 Incentive Plan") was terminated. Termination of the 2005 Incentive Plan did not affect any equity awards outstanding under the 2005 Incentive Plan.

The 2016 Incentive Plan provides for the grant of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, performance awards, and other awards ("Awards"). Subject to adjustment in certain circumstances, the maximum number of shares of Common Stock that may be issued or transferred in connection with Awards granted under the 2016 Incentive Plan will be the sum of (i) 8,000,000 shares of Common Stock and (ii) any shares of Common Stock that are represented by options previously granted under the 2005 Incentive Plan which are forfeited, expire, or are canceled without delivery of common stock or which result in the forfeiture or relinquishment of Common Stock back to the Company. To the extent Awards granted under the 2016 Incentive Plan terminate, expire, are canceled without being exercised, are forfeited or lapse for any reason, the shares of Common Stock subject to such Award will again become available for grants under the 2016 Incentive Plan.

The 2016 Incentive Plan expressly prohibits re-pricing stock options and appreciation rights. The 2016 Incentive Plan also, subject to certain limited exceptions, expressly requires a one-year vesting period for all stock options and appreciation rights.

No eligible person selected by the Board to receive awards ("Participant") will receive stock options, stock appreciation rights, restricted stock, restricted stock units, and other awards under the 2016 Incentive Plan, during any calendar year, for more than 3,000,000 shares of common stock. In addition, no Participant may receive performance shares or performance units having an aggregate value on the date of grant in excess of $9,000,000 during any calendar year. Each of the limits described above may be adjusted equitably to accommodate a change in the capital structure of the Company.

Stock options granted pursuant to the 2016 Incentive Plan are granted at an exercise price not less than the market value per share of the Company's common stock on the date of the grant. Under the 2016 Incentive Plan, the term of the outstanding options may not exceed ten years nor be less than one year. Vesting of options is determined by the Compensation Committee of the Board of Directors, the administrator of the 2016 Incentive Plan, and can vary based upon the individual award agreements. In addition, outstanding options do not have dividend equivalent rights associated with them under the 2016 Incentive Plan.

The Board may issue or transfer shares of common stock to Participants under a restricted stock grant for consideration or no consideration, and subject to restrictions, as determined by the Board. All restricted stock Awards will transfer ownership of such shares of restricted stock to the Participant and entitle the Participant to voting, dividend and other ownership rights, but the Participant's ownership of the restricted shares shall be subject to substantial risk of forfeiture and restrictions on transfer. The Board may establish conditions under which restrictions will lapse over a period of time based upon the achievement of performance goals or according to such other criteria as the Board deems appropriate (the "Restriction Period"). An Award Agreement for restricted stock Awards may specify any Management Objectives that, if achieved, will result in the termination or early termination of the restrictions on the restricted shares including, without limitation, any minimum acceptable levels of achievement or formulas for determining the number of restricted shares on which the restrictions will terminate.

The Board may award Participants "Performance Shares" or "Performance Units" (collectively, "Performance Awards") which will become payable to a Participant upon the achievement of specified "Management Objectives", which are measurable objectives established for Participants. Each Award Agreement for Performance Awards will specify: (i) the number of Performance Shares or Performance Units granted; (ii) the period of time established for the Participant to achieve the Management Objectives (the "Performance Period"); (iii) the Management Objectives and a minimum acceptable level of achievement as well as a formula for determining the number of Performance Shares or Performance Units earned if performance is at or above the minimum level but short of full achievement of the Management Objectives; and (iv) any other terms that the Board may deem appropriate.

2005 Equity and Performance Incentive Plan

The Company had a 2005 Incentive Plan, under which shares of the Company's common stock have been reserved for issuance to eligible employees or non-employee directors of the Company. The 2005 Incentive Plan provides for the grant of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock awards, performance awards and other awards. The maximum number of shares of the Company's common stock that may be issued or transferred in connection with awards granted under the 2005 Incentive Plan is the sum of (i) 9,000,000 shares and (ii) any shares represented by outstanding options that had been granted under designated terminated stock option plans that are subsequently forfeited, expire or are canceled without delivery of the Company's common stock.

On July 24, 2007, the stockholders of the Company approved the First Amendment to the 2005 Incentive Plan which increased the number of shares authorized for issuance under the plan from 9,000,000 to 15,000,000 and contained certain other amendments, including an amendment to provide that the exercise price for any options granted under the 2005 Incentive Plan, as amended, may not be less than the market value per share of common stock on the date of grant. On June 14, 2012, the stockholders of the Company approved the Second Amendment to the 2005 Incentive Plan which increased the number of shares authorized for issuance under the plan from 15,000,000 to 23,250,000.

Stock options granted pursuant to the 2005 Incentive Plan are granted at an exercise price not less than the market value per share of the Company's common stock on the date of the grant. Prior to the adoption of the First Amendment to the 2005 Incentive Plan, stock options granted under the 2005 Incentive Plan were granted with an exercise price not less than the market value per share of common stock on the date immediately preceding the date of grant. Under the 2005 Incentive Plan, the term of the outstanding options may not exceed ten years. Vesting of options is determined by the Compensation Committee of the Board of Directors, the administrator of the 2005 Incentive Plan, and can vary based upon the individual award agreements.

Supplemental options granted pursuant to the 2005 Incentive Plan are granted at an exercise price not less than the market value per share of the Company's common stock on the date of the grant. These options vest, if at all, based upon (i) tranche one - any time after the third anniversary date if the stock has traded at 133% of the exercise price for at least 20 consecutive trading days, (ii) tranche two - any time after the fourth anniversary date if the stock has traded at 167% of the exercise price for at least 20 consecutive trading days, and (iii) tranche three - any time after the fifth anniversary date if the stock has traded at 200% of the exercise price for at least 20 consecutive trading days. The employees must also remain employed with the Company as of the anniversary date in order for the options to vest. The exercise price of the supplemental stock options is the closing market price on the date the awards were granted.

Performance awards granted pursuant to the 2005 Incentive Plan become payable upon the achievement of specified management objectives. Each performance award specifies: (i) the number of performance shares or units granted, (ii) the period of time established to achieve the management objectives, which may not be less than one year from the grant date, (iii) the management objectives and a minimum acceptable level of achievement as well as a formula for determining the number of performance shares or units earned if performance is at or above the minimum level but short of full achievement of the management objectives, and (iv) any other terms deemed appropriate.

Restricted stock awards granted pursuant to the 2005 Incentive Plan have requisite service periods of three years and vest in increments of 33%, respectively, on the anniversary of the grant date. Under each arrangement, stock is issued without direct cost to the employee. Restricted stock awards granted to our Board of Directors vest one year from grant or as of the next annual shareholders meeting, whichever is earlier.

A summary of stock options issued under the various Stock Incentive Plans previously described and changes is as follows:

	Number of Shares	Weighted-Average Exercise Price ($)	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value of In-the-Money Options ($)
Outstanding, December 31, 2014	5,282,693	$ 12.06		
Granted	2,055,514	19.12		
Exercised	(1,144,273)	10.62		
Forfeited	(394,265)	19.06		
Expired	(593)	20.51		
Outstanding, December 31, 2015	5,799,076	14.37		
Granted	2,284,500	17.92		
Exercised	(792,841)	11.69		
Forfeited	(446,845)	18.69		
Expired	(52,515)	20.44		
Outstanding, December 31, 2016	6,791,375	15.54		
Granted	864,800	20.12		
Exercised	(1,204,559)	11.52		
Forfeited	(268,417)	18.43		
Expired	(20,482)	20.11		
Outstanding, December 31, 2017	6,162,717	$ 16.83	6.69	$35,976,295
Exercisable, December 31, 2017	3,486,892	$ 15.28	5.52	$25,770,089

The weighted-average grant date fair value of stock options granted during the years ended December 31, 2017, 2016, and 2015 was $6.24, $5.59, and $6.49, respectively. The total intrinsic value of stock options exercised during the years ended December 31, 2017, 2016, and 2015 was $13.4 million, $6.8 million, and $12.4 million, respectively.

The fair value of options granted in the respective fiscal years are estimated on the date of grant using the Black-Scholes option-pricing model, acceptable under ASC 718, with the following weighted-average assumptions:

	Years Ended December 31,		
	2017	2016	2015
Expected life (years)	5.6	5.9	5.9
Risk-free interest rate	1.9%	1.2%	1.4%
Expected volatility	29.4%	29.7%	32.1%
Expected dividend yield	—	—	—

Expected volatilities are based on the Company's historical common stock volatility derived from historical stock price data for historic periods commensurate with the options' expected life. The expected life of options granted represents the period of time that options granted are expected to be outstanding, based primarily on historical employee option exercise behavior. The risk-free interest rate is based on the implied yield currently available on U. S. Treasury zero coupon issued with a term equal to the expected life at the date of grant of the options. The expected dividend yield is zero as the Company has historically paid no dividends and does not anticipate dividends to be paid in the future.

During the year-ended December 31, 2016, the Company granted stock options with three tranches at a grant date fair value of $7.46, $7.06, and $6.50, respectively, per share. During the year-ended December 31, 2015, the Company granted stock options with three tranches at a grant date fair value of $8.01, $7.56, and $7.00, respectively, per share. These options vest, if at all, based upon (i) tranche one - any time after the third anniversary date if the stock has traded at 133% of the exercise price for at least 20 consecutive trading days, (ii) tranche two - any time after the fourth anniversary date if the stock has traded at 167% of the exercise price for at least 20 consecutive trading days, and (iii) tranche three - any time after the fifth anniversary date if the stock has traded at 200% of the exercise price for at least 20 consecutive trading days. The employees must also remain employed with the Company as of the anniversary date in order for the options to vest. The exercise price of the stock options is the closing market price on the date the awards were granted. In order to determine the grant date fair value of the stock options, a Monte Carlo simulation model is used. With respect to options granted that vest based on the achievement of certain market conditions, the grant date fair value of such options was estimated using the following weighted-average assumptions:

	Years Ended December 31,	
	2016	2015
Expected life (years)	7.5	7.5
Risk-free interest rate	1.6%	1.7%
Expected volatility	41.6%	41.9%
Expected dividend yield	—	—

Long-term Incentive Program Performance Share Awards

During the years ended December 31, 2017, 2016, and 2015, pursuant to the Company's 2016 Incentive Plan and 2005 Incentive Plan, the Company granted LTIP Performance Shares. These LTIP Performance Shares are earned, if at all, based upon the achievement, over a specified period that must not be less than one year and is typically a three-year performance period, of performance goals related to (i) the compound annual growth over the performance period in the sales for the Company as determined by the Company, and (ii) the cumulative operating income or earnings before interest, income taxes, depreciation, and amortization ("EBITDA") over the performance period as determined by the Company. In no event will any of the LTIP Performance Shares become earned if the Company's sales growth or cumulative operating income/EBITDA is below a predetermined minimum threshold level at the conclusion of the performance period. Assuming achievement of the predetermined sales growth and cumulative operating income/EBITDA threshold levels, up to 200% of the LTIP Performance Shares may be earned upon achievement of performance goals equal to or exceeding the maximum target levels for the performance goals over the performance period. Management must evaluate, on a quarterly basis, the probability that the threshold performance goals will be achieved, if at all, and the anticipated level of attainment in order to determine the amount of compensation costs to record in the consolidated financial statements.

During the first quarter of the year-ended December 31, 2015, the Company revised the expected attainment rate for the awards granted in fiscal 2011 from 100% to 91% due to actual sales and operating income. During the third quarter of the year-ended December 31, 2015, the Company revised the expected attainment rate for the awards granted in fiscal 2013 from 75% to 0% due to changes in forecasted sales and operating income. During the fourth quarter of the year-ended December 31, 2017, the Company revised the expected attainment rates for the awards granted in fiscal 2015 and 2016 from 100% to 0% and 65%, respectively, due to changes in actual and forecasted sales and operating income. The expected attainment rate for the 2017 grants remain at 100%.

At December 31, 2015, the LTIPs granted in 2012 were earned by the employees. As the thresholds were not met for the performance goals for the LTIPs granted in 2012, no shares were issued in the first quarter of 2016. At December 31, 2016, the LTIPs granted in 2013 were earned by the employees. As the thresholds were not met for the performance goals for the LTIPs granted in 2013, no shares were issued in the first quarter of 2017.

A summary of the nonvested LTIP Performance Shares are as follows:

Nonvested LTIP Performance Shares	Number of Shares at Expected Attainment	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2014	1,145,916	$ 14.84
Granted	1,025,863	19.12
Vested	(548,671)	9.75
Forfeited	(205,510)	19.39
Change in expected attainment for 2011 and 2013 grants	(528,303)	19.44
Nonvested at December 31, 2015	889,295	19.13
Granted	1,059,428	17.92
Forfeited	(210,667)	18.61
Nonvested at December 31, 2016	1,738,056	18.45
Granted	553,549	20.12
Forfeited	(201,441)	18.87
Change in expected attainment for 2015 and 2016 grants	(965,129)	18.75
Nonvested at December 31, 2017	1,125,035	$ 18.94

During the year-ended December 31, 2015 the Company had 548,671 LTIP shares vest. The Company withheld 196,169 of those shares to pay the employees' portion of the minimum payroll withholding taxes for the year-ended December 31, 2015.

Restricted Share Awards

During the years ended December 31, 2017, 2016, and 2015, pursuant to the Company's 2016 Incentive Plan and 2005 Incentive Plan, the Company granted restricted share awards ("RSAs"). The awards have requisite service periods of three years and vest in increments of 33% on the anniversary of the grant dates. Under each arrangement, stock is issued without direct cost to the employee. RSAs granted to our Board of Directors vest one year from grant or as of the next annual shareholders meeting, whichever is earlier. The Company estimates the fair value of the RSAs based upon the market price of the Company's stock at the date of grant. The RSA grants provide for the payment of dividends on the Company's common stock, if any, to the participant during the requisite service period (vesting period) and the participant has voting rights for each share of common stock. The Company recognizes compensation expense for RSAs on a straight-line basis over the requisite service period.

A summary of nonvested RSAs are as follows:

Nonvested Restricted Share Awards	Number of Restricted Share Awards	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2014	183,209	$ 17.11
Granted	125,026	23.82
Vested	(158,973)	17.21
Nonvested at December 31, 2015	149,262	22.62
Granted	148,322	20.19
Vested	(114,219)	22.64
Forfeited	(11,257)	21.01
Nonvested at December 31, 2016	172,108	20.62
Granted	560,174	20.61
Vested	(120,869)	20.72
Forfeited	(108,176)	20.39
Nonvested at December 31, 2017	503,237	$ 20.63

During the years ended December 31, 2017, 2016, and 2015, the Company had 120,869, 114,219, and 158,973 RSA shares vest, respectively. The Company withheld 3,311, 9,062, and 25,235 of those respective shares to pay the employees' portion of the minimum payroll withholding taxes.

Performance-Based Restricted Share Awards

During the year-ended December 31, 2015, pursuant to the Company's 2005 Incentive Plan, the Company granted PBRSAs. The PBRSA grants provide for the payment of dividends on the Company's common stock, if any, to the participant during the requisite service period (vesting period) and the participant has voting rights for each share of common stock. These PBRSA awards are earned, if at all, based upon the achievement of performance goals over a specific period (the "Performance Period") and completion of the service period. The PBRSAs granted on June 9, 2015 have a graded-vesting period of three years (33% vest each year) and are subject to performance targets based on the Company's EBITDA. The first 33% of the PBRSAs issued vest subject to meeting the EBITDA target for the year ending December 31, 2015. The remaining 66% of the PBRSAs issued, vest 33% at the end of year two and 33% at the end of year three, subject to meeting the EBITDA target for the year ending December 31, 2016. The PBRSAs granted on September 15, 2015 have a vesting period of 1.3 years and are subject to performance targets based on the Company's EBITDA for the year ending December 31, 2016. In no event will any of the PBRSA shares become earned if the Company's EBITDA is below a predetermined minimum threshold level at the conclusion of the Performance Period. Assuming achievement of the predetermined EBITDA threshold level, up to 150% of the PBRSA shares may be earned upon achievement of performance goals equal to or exceeding the maximum target levels for the performance goals over the Performance Period. Management will evaluate, on a quarterly basis, the probability that the threshold performance goals will be achieved, if at all, and the anticipated level of attainment in order to determine the amount of compensation costs to record in the consolidated financial statements.

Through December 31, 2015, the Company had accrued compensation costs assuming an attainment level of 100% for all PBRSA grants. During the year-ended December 31, 2016, the first tranche of the June 9th grant vested at 90.4%. During the first quarter of the year-ended December 31, 2017, the Company revised the attainment rate for the second and third tranches of the June 9th grant and the September 15th grant from 100% to 98% due to actual EBITDA achieved. The Company recognizes compensation expense for PBRSAs on a straight-line basis over the requisite service periods.

A summary of nonvested PBRSAs are as follows:

Nonvested Performance-Based Restricted Share Awards	Number of Performance-Based Restricted Share Awards	Weighted-Average Grant Date Fair Value
Nonvested as of December 31, 2014	—	$ —
Granted	978,365	23.45
Forfeited	(39,502)	24.24
Nonvested as of December 31, 2015	938,863	23.42
Forfeited	(67,397)	22.34
Vested	(169,567)	24.41
Change in attainment for 2015 grants	(18,232)	24.41
Nonvested as of December 31, 2016	683,667	23.25
Forfeited	(11,604)	23.84
Vested	(484,835)	22.82
Change in attainment for 2015 grants	(13,592)	23.25
Nonvested as of December 31, 2017	173,636	$ 24.41

During the years ended December 31, 2017 and 2016, 484,835 and 169,567 shares of the PBRSAs vested. The Company withheld 178,351 and 59,659 of those shares to pay the employees' portion of the minimum payroll withholding taxes.

Retention Restricted Share Awards

During the year-ended December 31, 2016, pursuant to the Company's 2005 Incentive Plan, the Company granted Retention RSAs. The Retention RSA awards granted to named executive officers had a requisite service period (vesting period) of 1.3 years and vested 50% on July 1, 2016 and 50% on July 1, 2017. Retention RSA awards granted to employees other than named executive officers had a vesting period of 0.8 years and vested 50% on July 1, 2016 and 50% on January 1, 2017. Under each agreement, stock is issued without direct cost to the employee. The Company estimates the fair value of the Retention RSAs based upon the market price of the Company's stock at the date of grant. The Retention RSA grants provide for the payment of dividends on the Company's common stock, if any, to the participant during the requisite service period and the participant has voting rights for each share of common stock. The Company recognizes compensation expense for Retention RSAs on a straight-line basis over the requisite service period.
A summary of nonvested Retention RSAs are as follows:

Nonvested Retention Restricted Share Awards	Number of Retention Restricted Share Awards	Weighted-Average Grant Date Fair Value
Nonvested as of December 31, 2015	—	$ —
Granted	473,069	17.89
Vested	(226,526)	17.89
Forfeited	(41,003)	17.89
Nonvested as of December 31, 2016	205,540	17.89
Vested	(205,540)	17.89
Nonvested as of December 31, 2017	—	$ —

During the year-ended December 31, 2017 and 2016, 205,540 and 226,526 shares of the Retention RSAs vested, respectively. The Company withheld 75,198 and 76,421 of those respective shares to pay the employees' portion of the minimum payroll withholding taxes.

PAY.ON Restricted Share Awards

Under the terms of the PAY.ON acquisition agreement, the Company issued PAY.ON RSAs to two key employees. The awards had requisite service periods of two years and vested in increments of 25% every six months from the date of the acquisition. The PAY.ON RSA grants provide for the payment of dividends on the Company's common stock, if any, to the participant during the requisite service period (vesting period) and the participant has voting rights for each share of common stock. The Company recognizes compensation expense for the PAY.ON RSAs on a straight-line basis over the requisite service period.

A summary of nonvested PAY.ON RSAs are as follows:

Nonvested PAY.ON RSAs	Number of PAY.ON RSAs	Grant Date Fair Value
Nonvested at December 31, 2014	—	$ —
Granted	476,750	23.60
Nonvested at December 31, 2015	476,750	23.60
Vested	(238,374)	23.60
Nonvested at December 31, 2016	238,376	23.60
Forfeited	(119,188)	23.60
Vested	(119,188)	23.60
Nonvested at December 31, 2017	—	$ —

Total Shareholder Return Awards

During the year-ended December 31, 2017, the Company granted total shareholder return ("TSR") awards, pursuant to the 2016 Incentive Plan, to certain executive officers. TSRs are performance shares that are earned, if at all, based upon the Company's total shareholder return as compared to a group of peer companies over a three-year performance period. The award payout can range from 0% to 200%. In order to determine the grant date fair value of the TSRs, a Monte Carlo simulation model is used. The Company recognizes compensation expense for the TSRs over a three-year performance period based on the grant date fair value.

During the fourth quarter of the year-ended December 31, 2017, the Company revised the expected attainment rate for the awards granted in fiscal 2017 from 100% to 64% due to changes in the Company's total shareholder return.

The grant date fair value of the TSRs was estimated using the following weighted-average assumptions:

	Year Ended December 31, 2017
Expected life (years)	2.9
Interest rate	1.5%
Volatility	26.5%
Dividend Yield	—

A summary of nonvested TSRs are as follows:

Nonvested Total Shareholder Return Awards	Number of Shares at Expected Attainment	Weighted-Average Grant Date Fair Value
Nonvested as of December 31, 2016	—	$ —
Granted	233,077	24.37
Forfeited	(8,624)	24.37
Change in Attainment in 2017	(80,804)	24.37
Nonvested as of December 31, 2017	143,649	$ 24.37

As of December 31, 2017, there were unrecognized compensation costs of $8.2 million related to nonvested stock options, $6.9 million related to the nonvested RSAs, $11.6 million related to the LTIP performance shares, $0.6 million related to nonvested PBRSAs, and $2.5 million related to the TSRs, which the Company expects to recognize over weighted-average periods of 1.5 years, 1.9 years, 1.9 years, 0.4 years, and 2.1 years, respectively.

The Company recorded stock-based compensation expenses recognized under ASC 718 during the years ended December 31, 2017, 2016, and 2015, related to stock options, LTIP Performance Shares, RSAs, PBRSAs, and the ESPP of $13.7 million, $43.6 million, and $18.4 million, respectively, with corresponding tax benefits of $1.7 million, $14.3 million, and $6.9 million, respectively. The Company recognizes compensation costs for stock option awards which vest with the passage of time with only service conditions on a straight-line basis over the requisite service period. The Company recognizes compensation costs for stock option awards that vest with service and market-based conditions on a straight-line basis over the longer of the requisite service period or the estimated period to meet the defined market-based condition.

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12. Employee Benefit Plans

ACI 401(k) Plan

The ACI 401(k) Plan is a defined contribution plan covering all domestic employees of the Company. Participants may contribute up to 75% of their annual eligible compensation up to a maximum of $18,000 (for employees who are under the age of 50 on December 31, 2017) or a maximum of $24,000 (for employees aged 50 or older on December 31, 2017). After one year of service, the Company matches participant contributions 100% on every dollar deferred to a maximum of 4% of eligible compensation contributed to the plan, not to exceed $4,000 per employee annually. Company contributions charged to expense during the years ended December 31, 2017, 2016, and 2015 was $5.3 million, $5.5 million, and $6.1 million, respectively.

ACI Worldwide EMEA Group Personal Pension Scheme

The ACI Worldwide EMEA Group Personal Pension Scheme is a defined contribution plan covering substantially all ACI Worldwide (EMEA) Limited ("ACI-EMEA") employees. For those ACI-EMEA employees who elect to participate in the plan, the Company contributes a minimum of 8.5% of eligible compensation to the plan for employees employed at December 1, 2000 (up to a maximum of 15.5% for employees aged over 55 years on December 1, 2000) or from 6% to 10% of eligible compensation for employees employed subsequent to December 1, 2000. ACI-EMEA contributions charged to expense during the year-ended December 31, 2017, 2016, and 2015 was $1.6 million, $1.7 million, and $1.8 million, respectively.

13. Income Taxes

On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Act") was signed into U.S. law. The Tax Act makes broad and complex changes to the U.S. tax code that affects 2017 and later years. On December 22, 2017, the Securities and Exchange Commission staff issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC 740, *Income Taxes*. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that a company's accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements.

The Tax Act reduced the U.S. federal corporate income tax rate from 35% to 21%, effective January 1, 2018. In accordance with SAB 118, the Company has recorded a $15.0 million provisional tax charge amount for the year ended December 31, 2017 resulting from remeasuring of its net deferred tax assets and liabilities. The Company has also recorded a $20.9 million provisional tax charge amount for the year ended December 31, 2017 related to a one-time transition tax on certain unremitted foreign earnings as required by the Tax Act. These provisional tax charges resulting from the Tax Act are calculated using the Company's best estimates based upon the information currently available. These estimates may be impacted by the need for further analysis and future clarification and guidance regarding available tax accounting methods and elections, earnings and profits computations, and state tax conformity to federal tax changes. In addition, further regulatory guidance related to the Tax Act is expected to be issued in 2018 which may result in changes to the Company's current estimates. Any revisions to the estimated impacts of the Tax Act will be recorded quarterly until the computations are complete which is expected no later than the fourth quarter of 2018.

Other aspects of the Tax Act, including the "Global Intangible Low-Taxed Income" tax, "Foreign Derived Intangible Income" deduction, and "Base Erosion and Anti-Abuse" tax are effective beginning January 1, 2018. The Company has not yet determined its policy election with respect to whether to record deferred taxes for basis differences expected to reverse as a result of the Global Intangible Low-Taxed Income tax provisions in future years, or in the period in which that tax was incurred.

For financial reporting purposes, income before income taxes includes the following components (in thousands):

	Years Ended December 31,		
	2017	2016	2015
United States	$(42,863)	$134,740	$ 52,563
Foreign	86,435	50,841	60,810
Total	$ 43,572	$185,581	$113,373

The expense (benefit) for income taxes consists of the following (in thousands):

	Years Ended December 31, 2017	2016	2015
Federal			
Current	$ 2,586	$14,108	$ (6,889)
Deferred	19,212	19,034	18,024
Total	21,798	33,142	11,135
State			
Current	(1,857)	12,565	379
Deferred	(1,324)	(2,502)	(4,096)
Total	(3,181)	10,063	(3,717)
Foreign			
Current	16,048	11,671	15,117
Deferred	3,772	1,170	5,402
Total	19,820	12,841	20,519
Total	$38,437	$56,046	$27,937

Differences between the income tax expense computed at the statutory federal income tax rate and per the consolidated statements of operations are summarized as follows (in thousands):

	Years Ended December 31, 2017	2016	2015
Tax expense at federal rate of 35%	$ 15,250	$ 64,953	$39,680
State income taxes, net of federal benefit	(2,238)	7,060	(2,462)
Change in valuation allowance	(1,884)	(8,524)	(9,066)
Foreign tax rate differential	(15,622)	(11,830)	(5,710)
Unrecognized tax benefit increase	3,007	1,045	2,977
Tax effect of foreign operations	5,532	5,988	261
Acquisition costs	—	28	—
Tax benefit of research & development	(1,904)	(1,088)	(871)
Transition tax	20,867	—	—
Revaluation of deferred tax balances	14,953	—	—
Performance based compensation	2,081	—	—
Domestic production activities deduction	(3,793)	(700)	—
Other	2,188	(886)	3,128
Income tax provision	$ 38,437	$ 56,046	$27,937

The countries having the greatest impact on the tax rate adjustment line shown in the above table as “Foreign tax rate differential” for the year-ended December 31, 2017 are Ireland, Luxembourg and the United Kingdom. The countries having the greatest impact on the tax rate adjustment line shown in the above table as “Foreign tax rate differential” for the year-ended December 31, 2016 are Ireland, South Africa, and the United Kingdom. The countries having the greatest impact on the tax rate adjustment line shown in the above table as “Foreign tax rate differential” for the year-ended December 31, 2015 are Ireland, Netherlands, South Africa, and the United Kingdom.

The deferred tax assets and liabilities result from differences in the timing of the recognition of certain income and expense items for tax and financial accounting purposes. The sources of these differences at each balance sheet date are as follows (in thousands):

	December 31, 2017	December 31, 2016
Deferred income tax assets:		
Net operating loss carryforwards	$ 38,419	$ 65,351
Tax credits	37,305	25,173
Compensation	18,124	39,340
Deferred revenue	22,248	27,303
Other	9,055	6,279
Gross deferred income tax assets	125,151	163,446
Less: valuation allowance	(7,808)	(9,659)
Net deferred income tax assets	$ 117,343	$ 153,787
Deferred income tax liabilities:		
Depreciation and amortization	$ (67,504)	$(102,657)
Total deferred income tax liabilities	(67,504)	(102,657)
Net deferred income taxes	$ 49,839	$ 51,130
Deferred income taxes / liabilities included in the balance sheet are:		
Deferred income tax asset - noncurrent	$ 66,749	$ 77,479
Deferred income tax liability - noncurrent	(16,910)	(26,349)
Net deferred income taxes	$ 49,839	$ 51,130

In assessing the realizability of deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The Company considers projected future taxable income, carryback opportunities, and tax planning strategies in making this assessment. Based upon the level of historical taxable income and projections for future taxable income over the periods which the deferred tax assets are deductible, the Company believes it is more likely than not that it will realize the benefits of these deductible differences, net of the valuation allowances recorded. During the year-ended December 31, 2017, the Company decreased its valuation allowance by $1.9 million which relates primarily to a reduction in valuation allowance on U.S. state net operating losses.

At December 31, 2017, the Company had domestic federal tax net operating losses (“NOLs”) of $104.6 million which will begin to expire in 2018. The Company had deferred tax assets equal to $6.2 million related to domestic state tax NOLs which will begin to expire in 2018. The Company does not have any valuation allowance against the federal tax NOLs, but has provided a $4.7 million valuation allowance against the deferred tax asset associated with the state NOLs. The Company had foreign tax NOLs of $39.8 million, of which $39.1 million may be utilized over an indefinite life, with the remainder expiring over the next 9 years. The Company has provided a $1.0 million valuation allowance against the deferred tax asset associated with the foreign NOLs.

The Company had U.S. foreign tax credit carryforwards at December 31, 2017 of $26.1 million. No valuation allowance has been established against these credits. The U.S. foreign tax credits will begin to expire in 2022. The Company had foreign tax credit carryforwards in other foreign jurisdictions at December 31, 2017 of $1.9 million, of which $1.6 million may be utilized over an indefinite life, with the remainder expiring over the next 7 years. The Company has provided a $1.6 million valuation allowance against the tax benefit associated with these foreign credits. The Company had domestic federal alternative minimum tax credit carryforwards at December 31, 2017 of $3.1 million, which have an indefinite life. The Company also had domestic federal and state general business credit carryforwards at December 31, 2017 of $11.0 million and $0.7 million, respectively, which will begin to expire in 2019 and 2022, respectively.

The unrecognized tax benefit at December 31, 2017 and 2016 was $27.2 million and $24.3 million, respectively, of which $21.5 million and $17.6 million, respectively, are included in other noncurrent liabilities in the consolidated balance sheet. Of the total unrecognized tax benefit amounts at December 31, 2017 and 2016, $25.9 million and $23.2 million, respectively, represent the net unrecognized tax benefits that, if recognized, would favorably impact the effective income tax rate in respective years.

A reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31 is as follows (in thousands):

	2017	2016	2015
Balance of unrecognized tax benefits at beginning of year	$24,278	$21,079	$14,780
Increases for tax positions of prior years	2,478	58	1,449
Decreases for tax positions of prior years	(114)	(361)	(47)
Increases for tax positions established for the current period	1,677	5,185	9,866
Decreases for settlements with taxing authorities	(154)	(167)	(594)
Reductions resulting from lapse of applicable statute of limitation	(1,155)	(1,310)	(4,218)
Adjustment resulting from foreign currency translation	227	(206)	(157)
Balance of unrecognized tax benefits at end of year	$27,237	$24,278	$21,079

The Company files income tax returns in the U.S. federal jurisdiction, various state and local jurisdictions, and many foreign jurisdictions. The United States, Australia, Canada, India, Ireland, Luxembourg, South Africa, and United Kingdom are the main taxing jurisdictions in which the Company operates. The years open for audit vary depending on the tax jurisdiction. In the United States, the Company's tax returns for years following 2013 are open for audit. In the foreign jurisdictions, the tax returns open for audit generally vary by jurisdiction between 2005 and 2016.

The Company's Indian income tax returns covering fiscal years 2005 and 2010 through 2014 are under audit by the Indian tax authority. Other foreign subsidiaries could face challenges from various foreign tax authorities. It is not certain that the local authorities will accept the Company's tax positions. The Company believes its tax positions comply with applicable tax law and intends to vigorously defend its positions. However, differing positions on certain issues could be upheld by tax authorities, which could adversely affect the Company's financial condition and results of operations.

The Company believes it is reasonably possible that the total amount of unrecognized tax benefits will decrease within the next 12 months by approximately $0.1 million due to the settlement of various audits and the expiration of statutes of limitations. The Company accrues interest related to uncertain tax positions in interest expense or interest income and recognizes penalties related to uncertain tax positions in other income or other expense. As of December 31, 2017 and 2016, $1.2 million and $1.9 million, respectively is accrued for the payment of interest and penalties related to income tax liabilities. The aggregate amount of interest and penalties expense (benefit) recorded in the statements of operations for the years ended December 31, 2017, 2016, and 2015 is $(0.8) million, $(0.2) million, and $(0.1) million, respectively.

The Company previously considered all of the earnings in its non-U.S. subsidiaries to be indefinitely reinvested and, accordingly, recorded no deferred income taxes related to the unremitted earnings. An immediate transition tax established by the Tax Act subjected $355.0 million of the Company's undistributed foreign earnings to U.S taxation during the year-ended December 31, 2017, resulting in a provisional tax charge amount of $20.9 million. However, the Company is currently evaluating the potential foreign and U.S. state tax liabilities that would result from future repatriations, if any, and how the Tax Act will affect the Company's existing accounting position with regard to the indefinite reinvestment of undistributed foreign earnings. The Company expects to complete this evaluation and determine the impact which the Tax Act may have on its indefinite reinvestment assertion within the measurement period provided by SAB 118.

14. Commitments and Contingencies

In accordance with ASC 460, *Guarantees*, the Company recognizes the fair value for guarantee and indemnification arrangements it issues or modifies, if these arrangements are within the scope of the interpretation. In addition, the Company must continue to monitor the conditions that are subject to the guarantees and indemnifications as required under the previously existing generally accepted accounting principles, in order to identify if a loss has occurred. If the Company determines it is probable that a loss has occurred, then any such estimable loss would be recognized under those guarantees and indemnifications. Under its customer agreements, the Company may agree to indemnify, defend and hold harmless its customers from and against certain losses, damages and costs arising from claims alleging that the use of its software infringes the intellectual property of a third-party. Historically, the Company has not been required to pay material amounts in connection with claims asserted under these provisions and accordingly, the Company has not recorded a liability relating to such provisions.

Under its customer agreements, the Company also may represent and warrant to customers that its software will operate substantially in conformance with its documentation and that the services the Company performs will be performed in a workmanlike manner, by personnel reasonably qualified by experience and expertise to perform their assigned tasks. Historically, only minimal costs have been incurred relating to the satisfaction of warranty claims. In addition, from time to time, the Company may guarantee the performance of a contract on behalf of one or more of its subsidiaries, or a subsidiary may guarantee the performance of a contract on behalf of another subsidiary.

Other guarantees include promises to indemnify, defend and hold harmless the Company's executive officers, directors and certain other key officers. The Company's certificate of incorporation provides that it will indemnify, and advance expenses to, its directors and officers to the maximum extent permitted by Delaware law. The indemnification covers any expenses and liabilities reasonably incurred by a person, by reason of the fact that such person is or was or has agreed to be a director or officer, in connection with the investigation, defense and settlement of any threatened, pending or completed action, suit, proceeding or claim. The Company's certificate of incorporation authorizes the use of indemnification agreements and the Company enters into such agreements with its directors and certain officers from time to time. These indemnification agreements typically provide for a broader scope of the Company's obligation to indemnify the directors and officers than set forth in the certificate of incorporation. The Company's contractual indemnification obligations under these agreements are in addition to the respective directors' and officers' rights under the certificate of incorporation or under Delaware law.

Operating Leases

The Company leases office space and equipment under operating leases that run through October 2028. The leases that the Company has entered into do not impose restrictions as to the Company's ability to pay dividends or borrow funds, or otherwise restrict the Company's ability to conduct business. On a limited basis, certain of the lease arrangements include escalation clauses which provide for rent adjustments due to inflation changes with the expense recognized on a straight-line basis over the term of the lease. Lease payments subject to inflation adjustments do not represent a significant portion of the Company's future minimum lease payments. A number of the leases provide renewal options, but in all cases such renewal options are at the election of the Company. Certain of the lease agreements provide the Company with the option to purchase the leased equipment at its fair market value at the conclusion of the lease term.

Total operating lease expense for the years ended December 31, 2017, 2016, and 2015 was $24.1 million, $25.3 million, and $26.6 million, respectively.

Aggregate minimum operating lease payments under these agreements in future fiscal years are as follows (in thousands):

Fiscal Year Ending December 31,	Operating Leases
2018	$ 17,172
2019	15,352
2020	12,502
2021	8,723
2022	6,536
Thereafter	26,479
Total minimum lease payments	$ 86,764

Legal Proceedings

On September 23, 2015, a jury verdict was returned against ACI Worldwide Corp. ("ACI Corp."), a subsidiary of the Company, for $43.8 million in connection with counterclaims brought by Baldwin Hackett & Meeks, Inc. ("BHMI") in the District Court of Douglas County, Nebraska. On September 21, 2012, ACI Corp. had sued BHMI for misappropriation of ACI Corp.'s trade secrets. The jury found that ACI Corp. had not met its burden of proof regarding these claims. On March 6, 2013, BHMI asserted counterclaims alleged to arise out of ACI Corp.'s filing of its lawsuit. On September 23, 2015, the jury found for BHMI on its counterclaims and awarded $43.8 million in damages. The court entered a judgment against ACI Corp. for $43.8 million for damages and $2.7 million for attorney fees and costs. ACI Corp. disagreed with the verdicts and judgment, and after the trial court denied ACI Corp.'s post-judgment motions ACI Corp. perfected an appeal of the dismissal of its claims against BHMI and the judgment in favor of BHMI. On June 9, 2017, the Nebraska Supreme Court affirmed the District Court judgment. The Company recorded expense of $48.1 million during the year-ended December 31, 2017, of which $46.7 million is included in general and administrative expense and $1.4 million in interest expense in the accompanying consolidated statement of operations. The Company paid the judgment, including interest, during the year-ended December 31, 2017.

15. Accumulated Other Comprehensive Loss

Activity within accumulated other comprehensive loss for the three years ended December 31, 2017, 2016, and 2015 were as follows:

	Unrealized gain on available-for-sale securities	Foreign currency translation	Accumulated other comprehensive loss
Balance at December 31, 2014	$ 22,977	$ (42,860)	$ (19,883)
Other comprehensive loss	(22,977)	(28,716)	(51,693)
Balance at December 31, 2015	—	(71,576)	(71,576)
Other comprehensive loss	—	(22,524)	(22,524)
Balance at December 31, 2016	—	(94,100)	(94,100)
Other comprehensive income	—	16,744	16,744
Balance at December 31, 2017	$ —	$ (77,356)	$ (77,356)

16. Quarterly Financial Data (unaudited)

(in thousands, except per share amounts)	Quarter Ended March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017	Year Ended December 31, 2017
Revenues:					
Software as a service and platform as a service	$ 99,447	$ 113,469	$ 99,761	$ 112,895	$ 425,572
License	59,381	54,180	50,017	129,546	293,124
Maintenance	54,471	56,009	56,349	55,242	222,071
Services	18,163	16,941	19,608	28,712	83,424
Total revenues	231,462	240,599	225,735	326,395	1,024,191
Operating expenses:					
Cost of revenue (1)	108,543	120,357	107,393	115,993	452,286
Research and development	37,285	34,969	33,935	30,732	136,921
Selling and marketing	27,137	28,817	25,236	26,695	107,885
General and administrative (2)	32,503	72,527	25,302	22,700	153,032
Depreciation and amortization	22,371	22,372	22,446	22,238	89,427
Total operating expenses	227,839	279,042	214,312	218,358	939,551
Operating income (loss)	3,623	(38,443)	11,423	108,037	84,640
Other income (expense):					
Interest expense	(10,160)	(10,664)	(9,374)	(8,815)	(39,013)
Interest income	106	150	165	143	564
Other, net	649	(1,766)	(1,059)	(443)	(2,619)
Total other income (expense)	(9,405)	(12,280)	(10,268)	(9,115)	(41,068)
Income (loss) before income taxes	(5,782)	(50,723)	1,155	98,922	43,572
Income tax expense (benefit)	(4,174)	(20,914)	(2,233)	65,758	38,437
Net income (loss)	$ (1,608)	$ (29,809)	$ 3,388	$ 33,164	$ 5,135
Earnings (loss) per share					
Basic	$ (0.01)	$ (0.25)	$ 0.03	$ 0.28	$ 0.04
Diluted	$ (0.01)	$ (0.25)	$ 0.03	$ 0.28	$ 0.04

(1) The cost of revenue excludes charges for depreciation but includes amortization of purchased and developed software for resale.
(2) General and administrative expenses in the second quarter includes the BHMI judgment as discussed in Note 14.

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(in thousands, except per share amounts)	Quarter Ended March 31, 2016	Quarter Ended June 30, 2016	Quarter Ended September 30, 2016	Quarter Ended December 31, 2016	Year Ended December 31, 2016
Revenues:					
Software as a service and platform as a service	$ 111,736	$102,265	$ 96,169	$ 101,119	$ 411,289
License	37,423	33,510	43,256	159,277	273,466
Maintenance	57,331	60,332	57,741	58,072	233,476
Services	19,576	23,823	19,809	24,262	87,470
Total revenues	226,066	219,930	216,975	342,730	1,005,701
Operating expenses:					
Cost of revenue (1) (2)	118,434	115,384	100,267	110,829	444,914
Research and development (2)	43,604	46,421	42,210	37,665	169,900
Selling and marketing (2)	29,992	28,795	29,874	29,421	118,082
General and administrative (2)	26,068	34,520	31,390	21,639	113,617
Gain on sale of CFS assets	(151,952)	—	489	—	(151,463)
Depreciation and amortization	23,208	21,382	22,098	22,833	89,521
Total operating expenses (2)	89,354	246,502	226,328	222,387	784,571
Operating income (loss) (2)	136,712	(26,572)	(9,353)	120,343	221,130
Other income (expense):					
Interest expense	(10,414)	(9,715)	(9,838)	(10,217)	(40,184)
Interest income	150	121	145	114	530
Other, net	(334)	2,023	2,794	(378)	4,105
Total other income (expense)	(10,598)	(7,571)	(6,899)	(10,481)	(35,549)
Income (loss) before income taxes (2)	126,114	(34,143)	(16,252)	109,862	185,581
Income tax expense (benefit) (2)	36,970	(17,669)	(6,426)	43,171	56,046
Net income (loss) (2)	$ 89,144	$ (16,474)	$ (9,826)	$ 66,691	$ 129,535
Earnings (loss) per share					
Basic	$ 0.75	$ (0.14)	$ (0.08)	$ 0.57	$ 1.10
Diluted	$ 0.74	$ (0.14)	$ (0.08)	$ 0.56	$ 1.09

(1) The cost of revenue excludes charges for depreciation but includes amortization of purchased and developed software for resale.

(2) The Company adopted ASU 2016-09, *Compensation - Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, (“ASU 2016-09”) during the year ended December 31, 2016. The Company elected to early adopt ASU 2016-09 in the third quarter of 2016, which requires it to reflect any adjustments as of January 1, 2016, the beginning of the annual period that includes the interim period of adoption. The impact of the adoption to the Company’s previously reported quarterly results for the quarters ended March 31 and June 30, 2016 are reflected in the table above.

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EXHIBIT INDEX

Exhibit No.		Description
3.01	(1)	2013 Amended and Restated Certificate of Incorporation of the Company
3.02	(2)	Amended and Restated Bylaws of the Company
4.01	(3)	Form of Common Stock Certificate (P)
4.02	(4)	Indenture, dated as of August 20, 2013, among the ACI Worldwide, Inc., the guarantors listed therein, and Wilmington Trust, National Association, as trustee
4.03		Form of 6.375% Senior Notes due 2020 (included as Exhibit A to Exhibit 4.02)
10.01	(5)*	ACI Worldwide, Inc. 2017 Employee Stock Purchase Plan
10.02	(6)*	ACI Worldwide, Inc. 2005 Equity and Performance Incentive Plan, as amended
10.03	(7)*	Form of Severance Compensation Agreement (Change-in-Control) between the Company and certain officers, including executive officers
10.04	(8)*	Form of Indemnification Agreement between the Company and certain officers, including executive officers
10.05	(9)*	Form of Nonqualified Stock Option Agreement – Non-Employee Director for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.06	(10)*	Form of Nonqualified Stock Option Agreement – Employee for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.07	(11)*	Form of LTIP Performance Shares Agreement for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.08	(12)*	Amended and Restated Employment Agreement by and between the Company and Philip G. Heasley, dated December 4, 2015 (effective as of January 7, 2016)
10.09	(13)*	ACI Worldwide, Inc. 2013 Executive Management Incentive Compensation Plan
10.10	(14)*	Form of Change-in-Control Employment Agreement between the Company and certain officers, including executive officers
10.11	(15)*	Form of Restricted Share Award Agreement for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.12	(16)*	Amended and Restated Deferred Compensation Plan
10.13	(17)	Credit Agreement, dated February 24, 2017, by and among ACI Worldwide, Inc., Bank of America, N.A. and the lenders that are party thereto
10.14	(18)*	Form of 2015 Supplemental Performance Shares Agreement for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.15	(19)*	Form of 2015 Supplemental Non-Qualified Stock Option Agreement for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.16	(20)*	Form of 2015 Performance Shares Agreement for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.17	(21)*	Form of 2015 Non-Qualified Stock Option Agreement – Employee for the Company's 2005 Equity and Performance Incentive Plan, as amended
10.18	(22)*	ACI Worldwide, Inc. 2016 Equity and Performance Incentive Plan
10.19	(23)*	Form of 2016 Supplemental Performance Share Award Agreement for the Company's 2016 Equity and Performance Incentive Plan
10.20	(24)*	Form of 2016 Supplemental Nonqualified Stock Option Agreement for the Company's 2016 Equity and Performance Incentive Plan
10.21	(25)*	Form of Performance Share Award Agreement for the Company's 2016 Equity and Performance Incentive Plan

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10.22	(26)*	Form of 2016 Nonqualified Stock Option Agreement for the Company’s 2016 Equity and Performance Incentive Plan
10.23	(27)*	Form of 2016 Restricted Share Award Agreement for the Company’s 2016 Equity and Performance Incentive Plan
10.24	(28)*	Form of 2016 Restricted Share Award Agreement – Nonemployee Director for the Company’s 2016 Equity and Performance Incentive Plan
10.25	(29)*	Form of Change-in-Control Employment Agreement
10.26 *		Form of 2016 Restricted Share Unit Award Agreement for the Company’s 2016 Equity and Performance Incentive Plan
21.01		Subsidiaries of the Registrant (filed herewith)
23.01		Consent of Independent Registered Public Accounting Firm (filed herewith) - Deloitte & Touche LLP
31.01		Certification of Chief Executive Officer pursuant to S.E.C. Rule 13a-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.02		Certification of Chief Financial Officer pursuant to S.E.C. Rule 13a-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.01	**	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith)
32.02	**	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith)
101.INS		XBRL Instance Document
101.SCH		XBRL Taxonomy Extension Schema
101.CAL		XBRL Taxonomy Extension Calculation Linkbase
101.LAB		XBRL Taxonomy Extension Label Linkbase
101.PRE		XBRL Taxonomy Extension Presentation Linkbase
101.DEF		XBRL Taxonomy Extension Definition Linkbase

(P) Paper Exhibit
(1) Incorporated herein by reference to Exhibit 3.1 to the registrant’s current report on Form 8-K filed August 17, 2017.
(2) Incorporated herein by reference to Exhibit 3.1 to the registrant’s current report on Form 8-K filed February 27, 2017.
(3) Incorporated herein by reference to Exhibit 4.01 to the registrant’s Registration Statement No. 33-88292 on Form S-1.
(4) Incorporated herein by reference to Exhibit 4.1 to the registrant’s current report on Form 8-K filed August 20, 2013.
(5) Incorporated herein by reference to Annex A to the registrant’s Proxy Statement filed on April 27, 2017.
(6) Incorporated herein by reference to Exhibit 10.7 to the registrant’s quarterly report on Form 10-Q for the period ended June 30, 2014.
(7) Incorporated herein by reference to Exhibit 10.9 to the registrant’s annual report on Form 10-K for the year-ended December 31, 2009.
(8) Incorporated herein by reference to Exhibit 10.10 to the registrant’s annual report on Form 10-K for the year-ended December 31, 2009.
(9) Incorporated herein by reference to Exhibit 10.17 to the registrant’s annual report on Form 10-K for the year-ended December 31, 2009.
(10) Incorporated herein by reference to Exhibit 10.18 to the registrant’s annual report on Form 10-K for the year-ended December 31, 2009.
(11) Incorporated herein by reference to Exhibit 10.1 to the registrant’s current report on Form 8-K filed December 16, 2009.
(12) Incorporated herein by reference to Exhibit 10.1 to the registrant’s current report on Form 8-K filed on December 9, 2015.
(13) Incorporated herein by reference to Annex A to the registrant’s Proxy Statement for its 2013 Annual Meeting (File No. 000-25346) filed on April 29, 2013.
(14) Incorporated herein by reference to Exhibit 10.3 the registrant’s current report on Form 8-K filed June 20, 2016.
(15) Incorporated herein by reference to Exhibit 10.29 to the registrant’s annual report on Form 10-K for the year-ended December 31, 2009.
(16) Incorporated herein by reference to Exhibit 4.3 to the registrant’s Registration Statement No. 333-169293 on Form S-8 filed September 9, 2010
(17) Incorporated herein by reference to Exhibit 10.1 to the registrant’s current report on Form 8-K filed February 27, 2017.
(18) Incorporated herein by reference to Exhibit 10.1 to the registrant’s current report on Form 8-K filed January 30, 2015.
(19) Incorporated herein by reference to Exhibit 10.2 to the registrant’s current report on Form 8-K filed January 30, 2015.
(20) Incorporated herein by reference to Exhibit 10.3 to the registrant’s current report on Form 8-K filed January 30, 2015.

(21) Incorporated herein by reference to Exhibit 10.4 to the registrant's current report on Form 8-K filed January 30, 2015.
(22) Incorporated herein by reference to Exhibit 10.1 to the registrant's current report on Form 8-K filed June 20, 2016.
(23) Incorporated herein by reference to Exhibit 10.02 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2016.
(24) Incorporated herein by reference to Exhibit 10.03 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2016.
(25) Incorporated herein by reference to Exhibit 10.2 to the registrant's current report on Form 8-K filed February 27, 2017.
(26) Incorporated herein by reference to Exhibit 10.05 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2016.
(27) Incorporated herein by reference to Exhibit 10.06 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2016.
(28) Incorporated herein by reference to Exhibit 10.07 to the registrant's quarterly report on Form 10-Q for the period ended June 30, 2016.
(29) Incorporated herein by reference to Exhibit 10.3 to the registrant's current report on Form 8-K filed June 20, 2016.

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* Denotes exhibit that constitutes a management contract, or compensatory plan or arrangement.

** This certification is not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the Company specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ACI WORLDWIDE, INC.
(Registrant)

Date: February 27, 2018

By: /s/ PHILIP G. HEASLEY
Philip G. Heasley
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Title	Date
/s/ PHILIP G. HEASLEY Philip G. Heasley	President, Chief Executive Officer and Director *(Principal Executive Officer)*	February 27, 2018
/s/ SCOTT W. BEHRENS Scott W. Behrens	Senior Executive Vice President, Chief Financial Officer and Chief Accounting Officer *(Principal Financial Officer)*	February 27, 2018
/s/ DAVID A. POE David A. Poe	Chairman of the Board and Director	February 27, 2018
/s/ JAN H. SUWINSKI Jan H. Suwinski	Director	February 27, 2018
/s/ JOHN M. SHAY JR. John M. Shay Jr.	Director	February 27, 2018
/s/ JAMES C. MCGRODDY James C. McGroddy	Director	February 27, 2018
/s/ JAMES C. HALE James C. Hale	Director	February 27, 2018
/s/ CHARLES E. PETERS JR Charles E. Peters JR	Director	February 27, 2018
/s/ ADALIO T. SANCHEZ Adalio T. Sanchez	Director	February 27, 2018
/s/ THOMAS W. WARSOP III Thomas W. Warsop III	Director	February 27, 2018
/s/ JANET ESTEP Janet Estep	Director	February 27, 2018

RESTRICTED SHARE UNIT AWARD AGREEMENT

THIS RESTRICTED SHARE UNIT AWARD AGREEMENT (this “Agreement”) is made as of the date set forth in Schedule A hereto (the “Grant Date”) by and between ACI Worldwide, Inc., a Delaware corporation (the “Corporation”) and the individual identified in Schedule A hereto, an employee of the Corporation or its Subsidiaries (the “Grantee”). Capitalized terms not otherwise defined herein shall have the meaning ascribed to such terms in the ACI Worldwide, Inc. 2016 Equity and Performance Incentive Plan (the “Plan”).

WHEREAS, the Board has duly adopted, and the stockholders of the Corporation have approved, the Plan, which authorizes the Corporation to grant to eligible individuals restricted share units, each such restricted share unit being equal in value to one share of the Corporation’s common stock, par value of $0.005 per share (the “Common Shares”); and

WHEREAS, the Board has determined that it is desirable and in the best interests of the Corporation and its stockholders to approve a long-term incentive program and, in connection therewith, to grant the Grantee a certain number of restricted share units, in order to provide the Grantee with an incentive to advance the interests of the Corporation, all according to the terms and conditions set forth herein and in the Plan.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties hereto do hereby agree as follows:

1. **Grant of Restricted Share Units.**

(a) Subject to the terms of the Plan, the Corporation hereby grants to the Grantee the number of restricted share units (the “Restricted Share Units”) set forth in Schedule A, payment of which is subject to the terms and conditions of this Agreement.

(b) The Grantee’s right to receive all or any portion of the Restricted Share Units shall remain forfeitable at all times prior to vesting in accordance with Sections 2, 3 and 4 hereof.

2. **Vesting of Restricted Share Units.**

(a) Except as provided herein and subject to such other exceptions as may be determined by the Compensation Committee of the Board (the “Committee”) in its discretion, the Restricted Share Units shall vest in increments as set forth in Schedule A.

(b) Conditions; Determination of Vested Award. Except as otherwise provided herein, the Grantee’s right to receive any Restricted Share Units is contingent upon his or her remaining in the continuous employ of the Corporation or a Subsidiary through the end of the applicable vesting date set forth on Schedule A. For purposes of this Agreement, the continuous employ of the Grantee shall not be considered interrupted or terminated in the case of transfers between locations of the Corporation and its Subsidiaries.

3. **Disability or Death.** If the Grantee's employment with the Corporation or a Subsidiary terminates due to Disability (as defined below) or death, the unvested portion of any Restricted Stock Units shall become immediately vested. For purposes of this Agreement,

"Disability" means the Grantee's permanent and total disability as defined in Section 22(e)(3) of the Code.

4. **Other Termination.** If the Grantee's employment with the Corporation or a Subsidiary terminates before the vesting of the Restricted Share Units for any reason other than as set forth in Section 3 above, the Restricted Share Units will be forfeited.

5. [Intentionally Omitted]

6. **Payment of Restricted Share Units.** Payment of any Restricted Share Units that vest as set forth herein will be made in the form of Common Shares, in cash, or in a combination of the two, as determined in the sole discretion of the Committee. Payment will be made as soon as practicable after the applicable vesting date.

7. **Withholding of Taxes.**

(a) The Grantee shall be liable for any and all federal, state, local or non-US taxes applicable to the Grantee, including, without limitation, withholding taxes, social security/national insurance contributions and employment taxes, arising out of this grant of Restricted Share Units, the issuance of Common Shares as payment for vested Restricted Share Units hereunder or the payment of cash for vested Restricted Share Units. In the event that the Corporation or the Grantee's employer (the "Employer") is required to withhold taxes as a result of the grant of the Restricted Share Units, the issuance of Common Shares as payment for vested Restricted Share Units or the payment of cash for vested Restricted Share Units, the Grantee shall at the election of the Corporation, in its sole discretion, either (i) surrender a sufficient number of whole Common Shares, having a Market Value per Share on the date such Restricted Share Units become taxable equal to the amount of such taxes, or (ii) make a cash payment, as necessary to cover all applicable required withholding taxes and required social security/national insurance contributions on the date such Restricted Share Units become taxable, unless the Corporation, in its sole discretion, has established alternative procedures for such payment. If the number of shares required to cover all applicable withholding taxes and required social security/national insurance contributions includes a fractional share, then Grantee shall deliver cash in lieu of such fractional share. All matters with respect to the total amount to be withheld shall be determined by the Corporation in its sole discretion.

(b) Regardless of any action the Corporation or the Grantee's Employer takes with respect to any or all income tax, social security/national insurance, payroll tax, payment on account or other tax-related withholding ("Tax-Related Items"), the Grantee acknowledges and agrees that the ultimate liability for all Tax-Related Items legally due by him is and remains the Grantee's responsibility and that the Corporation and or the Employer (i) make no representations nor undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of this grant of Restricted Share Units, including the grant of Restricted Share Units, the issuance of Common Shares as payment for vested Restricted Share Units, the payment of cash for vested Restricted Share Units or the subsequent sale of any Common Shares issued hereunder and receipt of any dividends; and (ii) do not commit to structure the terms or any aspect of this grant of Restricted Share Units to reduce or eliminate the Grantee's liability for Tax-Related Items. The Grantee shall pay the Corporation or the Employer any amount of Tax-Related Items that the Corporation or the Employer may be required to withhold as a result of the Grantee's participation in the Plan or the Grantee's grant of Restricted Share Units, the Common Shares issued as payment for vested Restricted Share Units or the payment of cash for vested Restricted Share Units that cannot be satisfied by the means previously described above in Section 7(a). The Corporation may refuse to issue Common Shares as payment of vested Restricted Share Units related thereto if the Grantee fails to comply with the Grantee's obligations in connection with the Tax-Related Items.

8. **Forfeiture and Right of Recoupment.** Notwithstanding anything contained herein to the contrary, by accepting these Restricted Share Units, Grantee understands and agrees that if (a) the Corporation is required to restate its consolidated financial statements because of material noncompliance due to irregularities with the federal securities laws, which restatement is due, in whole or in part, to the misconduct of Grantee, or (b) it is determined that the Grantee has otherwise engaged in misconduct (whether or not such misconduct is discovered by the Corporation prior to the termination of Grantee's employment), the Corporation may take such action with respect to the Restricted Share Units as the Corporation, in its sole discretion, deems necessary or appropriate and in the best interest of the Corporation and its stockholders. Such action may include, without limitation, causing the forfeiture of unvested Restricted Share Units, requiring the transfer of ownership back to the Corporation of Common Shares issued as payment for vested Restricted Share Units and still held by the Grantee, cash received by the Grantee as payment for vested Restricted Share Units and the recoupment of any proceeds from the sale of Common Shares issued as payment for Restricted Share Units vested pursuant to this Agreement. For purposes of this Section 8, "misconduct" shall mean a deliberate act or acts of dishonesty or misconduct which either (i) were intended to result in substantial personal enrichment to the Grantee at the expense of the Corporation or (ii) have a material adverse effect on the Corporation. Any determination hereunder, including with respect to Grantee's misconduct, shall be made by the Board or its designee in its sole discretion. Notwithstanding any provisions herein to the contrary, Grantee expressly acknowledges and agrees that the rights of the Corporation set forth in this Section 8 shall continue after Grantee's employment with the Corporation or its Subsidiary is terminated, whether termination is voluntary or involuntary, with or without cause, and shall be in addition to every other right or remedy at law or in equity that may otherwise be available to the Corporation.

9. **Cash Dividends.** Cash dividends on the Restricted Share Units covered by this Agreement shall be sequestered by the Corporation from and after the Grant Date until such time as any of such Restricted Share Units become vested in accordance with this Agreement, whereupon such dividends shall be converted into a number of Common Shares (based on the Market Value per Share on the date such Restricted Share Units become vested) to the extent such dividends are attributable to Restricted Share Units that have become vested. To the extent that Restricted Share Units covered by this Agreement are forfeited, all of the dividends sequestered with respect to such Restricted Share Units shall also be forfeited. No interest shall be payable with respect to any such dividends.

10. **<u>Non-Assignability</u>.** The Restricted Share Units and the Common Shares subject to this grant of Restricted Share Units are personal to the Grantee and may not be sold, exchanged, assigned, transferred, pledged, encumbered or otherwise disposed of by the Grantee until they become vested as provided in this Agreement; provided, however, that the Grantee's rights with respect to such Restricted Share Units and Common Shares may be transferred by will or pursuant to the laws of descent and distribution or pursuant to a domestic relations order (within the meaning of Rule 16a-12 under the Securities Exchange Act of 1934, as amended). Any purported transfer or encumbrance in violation of the provisions of this Section 10, shall be void, and the other party to any such purported transaction shall not obtain any rights to or interest in such Restricted Share Units or Common Shares.

11. **<u>Compliance with Section</u> 409A of the Code.** To the extent applicable, it is intended that this Agreement and the Plan comply with the provisions of Section 409A of the Code, so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to the Grantee. This Agreement and the Plan shall be administered in a manner consistent with this intent, and any provision that would cause the Agreement or the Plan to fail to satisfy Section 409A of the Code shall have no force and effect until amended to comply with Section 409A of the Code (which amendment may be retroactive to the extent permitted by Section 409A of the Code and may be made by the Corporation without the consent of the Grantee).

12. **<u>Consent To Transfer Personal Data</u>.** By accepting these Restricted Share Units, Grantee voluntarily acknowledges and consents to the collection, use, processing and transfer of personal data as described in this Section 12. Grantee is not obliged to consent to such collection, use, processing and transfer of personal data. However, failure to provide the consent may affect Grantee's ability to participate in the Plan. The Corporation and its Subsidiaries hold certain personal information about Grantee, that may include Grantee's name, home address and telephone number, date of birth, social security number or other employee identification number, salary, nationality, job title, any shares of stock held in the Corporation, or details of any entitlement to shares of stock awarded, canceled, purchased, vested, or unvested, for the purpose of implementing, managing and administering the Plan ("Data"). The Corporation and/or its Subsidiaries will transfer Data amongst themselves as necessary for the purpose of implementation, administration and management of Grantee's participation in the Plan, and the Corporation and/or any of its Subsidiaries may each further transfer Data to any third parties assisting the Corporation in the implementation, administration and management of the Plan. These recipients may be located throughout the world, including the United States. Grantee authorizes them to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purpose of implementing, administering and managing Grantee's participation in the Plan, including any requisite transfer of such Data as may be required for the administration of the Plan and/or the subsequent holding of shares of stock on Grantee's behalf by a broker or other third party with whom Grantee or the Corporation may elect to deposit any shares of stock acquired pursuant to the Plan. Grantee may, at any time, review Data, require any necessary amendments to it or withdraw the consents herein in writing by contacting the Corporation; however, withdrawing consent may affect Grantee's ability to participate in the Plan.

13. **<u>Electronic Delivery and Acceptance</u>.** The Corporation may, in its sole discretion, decide to deliver any documents or notices related to current or future participation in the Plan by electronic means. By accepting the Restricted Share Units, electronically or otherwise, Grantee hereby consents to receive such documents or notices by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Corporation or a third party designated by the Corporation, including the use of electronic signatures or click-through acceptance of terms and conditions or other electronic means such as an e-mail acknowledgement.

14. **<u>Miscellaneous</u>.**

(a) The Restricted Share Units granted pursuant to this Agreement are granted subject to the terms and conditions set forth in the Plan, a copy of which has been delivered to the Grantee. All terms and conditions of the Plan, as may be amended from time to time, are hereby incorporated into this Agreement by reference and shall be deemed to be a part of this Agreement, without regard to whether such terms and conditions (including, for example, provisions relating to certain changes in capitalization of the Corporation) are otherwise set forth in this Agreement. In the event that there is any inconsistency between the provisions of this Agreement and of the Plan, the provisions of the Plan shall govern.

(b) All decisions and interpretations made by the Board or its designee with regard to any question arising under the Plan or this Agreement shall be binding and conclusive on the Grantee, the Grantee's estate, executor, administrator, beneficiaries, personal representative and guardian and the Corporation and its successors and assigns.

(c) The grant of the Restricted Share Units is discretionary and no provision in this Agreement shall be considered to be an employment contract or a part of the Grantee's terms and conditions of employment, nor shall any provision be construed to confer upon the Grantee the right to be employed or be retained in the employ by the Corporation or any Subsidiary, or to interfere in any way with the right and authority of the Corporation or any Subsidiary either to increase or decrease the compensation of the Grantee at any time, or to terminate any employment or other relationship between the Grantee and the Corporation or any Subsidiary.

(d) This Agreement, and the terms and conditions of the Plan, shall bind, and inure to the benefit of the Grantee, the Grantee's estate, executor, administrator, beneficiaries, personal representative and guardian and the Corporation and its successors and assigns.

(e) This Agreement shall be governed by the laws of the State of Delaware (but not including the choice of law rules thereof).

(f) Any action relating to or arising out of this Agreement shall be brought only in a court of competent jurisdiction located in Delaware or Florida and the parties expressly consent to such venue. The parties consent to the personal jurisdiction of the courts located in Delaware or Florida over them.

(g) Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto. The terms and conditions of this Agreement may not be modified, amended or waived, except by an instrument in writing signed by a duly authorized executive officer at the Corporation. Notwithstanding the foregoing, no amendment shall adversely affect the Grantee's rights under this Agreement without the Grantee's consent; <u>provided</u>, <u>however</u>, that the Corporation unilaterally may waive any provision hereof in writing to the extent that such waiver does not adversely affect the interests of the Grantee hereunder, but no such waiver shall operate as or be construed to be a subsequent waiver of the same provision or a waiver of any other provision hereof.

(h) Any notice hereunder by the Grantee to the Corporation shall be in writing and shall be deemed duly given (i) if mailed or delivered to the Corporation at its principal office, addressed to the attention of Stock Plan Administration, (ii) if electronically delivered to the e-mail address, if any, for Stock Plan Administration or (iii) if so mailed, delivered or electronically delivered to such other address or e-mail address as the Corporation may hereafter designate by notice to the Grantee. Any notice hereunder by the Corporation to the Grantee shall be in writing and shall be deemed duly given (i) if mailed or delivered to the Grantee at Grantee’s address listed in the Corporation’s records, (ii) if electronically delivered to the e-mail address, if any, for Grantee listed in the Corporation’s records or (iii) if so mailed, delivered or electronically delivered to such other address or e-mail address as the Grantee may hereafter designate by written notice given to the Corporation.

(i) If one or more of the provisions of this Agreement is invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

(j) This Agreement, the Plan, any Change-in-Control Employment Agreement between the Corporation and the Grantee, and, in the case of the Corporation’s Chief Executive Officer only, the Amended and Restated Employment Agreement entered into effective as January 7, 2016, together constitute the entire agreement and supersedes all prior understandings and agreements, written or oral, of the parties hereto with respect to the subject matter hereof.

(k) In the event that it is determined that the Grantee was not eligible to receive this award of Restricted Share Units, the award of Restricted Share Units and this Agreement shall be null and void and of no further effect.

(l) This Agreement will be deemed to be signed by the Corporation and Grantee upon Grantee’s acceptance of the Notice of Grant of Award attached as Schedule A.

Schedule A
(Attached)

Exhibit 21.01

SUBSIDIARIES OF THE REGISTRANT

The following is a list of subsidiaries of ACI Worldwide, Inc., omitting subsidiaries which, considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary as of December 31, 2017:

ACI Australia Pty. Ltd	Australia
ACI Worldwide (Pacific) Pty. Ltd.	Australia
Distra Pty. Ltd	Australia
ACI Worldwide (Canada), Inc.	Canada
ACI Worldwide Colombia S.A.S.	Colombia
Official Payments Corporation	Delaware
ACI Worldwide (eps) AG	Germany
Applied Communications Holding GmbH	Germany
ACI Worldwide Solutions Private Limited	India
Applied Communications Finance Limited	Ireland
Applied Communications GPC Limited	Ireland
Applied Communications (Ireland) Limited	Ireland
ACI Worldwide Luxembourg Holding S.a.r.l.	Luxembourg
ACI Worldwide (Luxembourg) S.a.r.l.	Luxembourg
ACI Worldwide Corp.	Nebraska
ACI Worldwide B.V.	Netherlands
ACI Worldwide (Asia) Pte. Ltd.	Singapore
ACI Worldwide Cornastone (Proprietary) Ltd.	South Africa
ACI Global Limited	United Kingdom
Applied Communications Inc. U.K. Holding Limited	United Kingdom
ACI Worldwide (EMEA) Limited	United Kingdom
S1 International IP Holding Limited	United Kingdom

Exhibit 23.01

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-123263, 333-146794, 333-182584, 333-212948, 333-169293, and 333-219608 on Form S-8 of our reports dated February 27, 2018, relating to the consolidated financial statements of ACI Worldwide, Inc. and subsidiaries ("ACI Worldwide, Inc."), and the effectiveness of ACI Worldwide Inc.'s internal control over financial reporting, appearing in this Annual Report on Form 10-K of ACI Worldwide, Inc. for the year ended December 31, 2017.

/s/ DELOITTE & TOUCHE LLP

Omaha, Nebraska
February 27, 2018

Exhibit 31.01

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Philip G. Heasley, certify that:

1. I have reviewed this annual report on Form 10-K of ACI Worldwide, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a -15(e) and 15d -15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2018

/s/ PHILIP G. HEASLEY

Philip G. Heasley
President, Chief Executive Officer and Director
(Principal Executive Officer)

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Scott W. Behrens, certify that:

1. I have reviewed this annual report on Form 10-K of ACI Worldwide, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

    c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: February 27, 2018

/s/ SCOTT W. BEHRENS

Scott W. Behrens
Senior Executive Vice President, Chief Financial Officer and
Chief Accounting Officer
(Principal Financial Officer)

Exhibit 32.01

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report of ACI Worldwide, Inc. (the "Company") on Form 10-K for the fiscal year-ended December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Philip G. Heasley, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 27, 2018

/s/ PHILIP G. HEASLEY

Philip G. Heasley
President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 32.02

**CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report of ACI Worldwide, Inc. (the "Company") on Form 10-K for the fiscal year-ended December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Scott W. Behrens Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 27, 2018

/s/ SCOTT W. BEHRENS

Scott W. Behrens
Senior Executive Vice President, Chief Financial Officer and
Chief Accounting Officer
(Principal Financial Officer)