2019
ANNUAL REPORT

Bottomline

To our shareholders,

2019 was a successful year for Bottomline. We generated record levels of subscription and transaction revenue, overall revenue and adjusted EBITDA. We also made significant advancements in our product set, allowing us to maintain and extend our competitive advantage in the markets we serve.

We produced strong financial results in 2019, demonstrating the merit of our strategic plan and the longer term potential of our business model. Highlights of the year include:

- Subscription and transaction revenue grew by $33 million from the prior year to $296 million
- Subscription and transaction revenue represented 70% of overall revenue and increased by 13% from the prior year
- Subscription and transaction gross margin was 57%, up from 55% in the prior year
- Recurring revenue for the year represented 87% of overall revenue
- Adjusted EBITDA was $100 million, or 24% of revenue

As we look ahead, we are confident in our ability to deliver continued innovation and business value to our customers – and in doing so we expect to continue to drive growth for our company and shareholders. The market opportunity for our product set is significant, with the majority of U.S. businesses still making more than half of their payments via paper check. The value proposition behind our offerings is clear: business payment automation saves time and money. In addition, in an environment where fraud is an ever-increasing threat, the increased security and peace of mind our solutions provide is of tremendous importance.

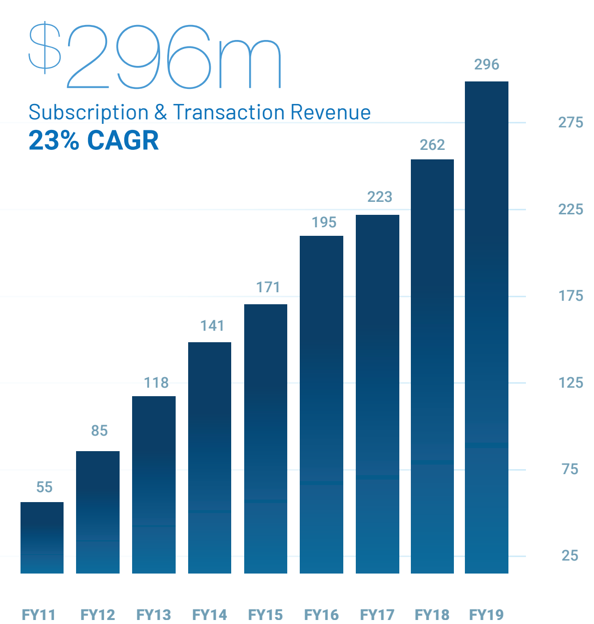
As we enter fiscal 2020, our focus is on continuing to drive significant subscription and transaction revenue growth. We believe we have the product set, the market opportunity and the team to drive subscription and transaction revenue growth to our target range of 15-20% for years to come. Our product investments, strategic plan and execution are all focused on that objective. We are confident in our ability to do so and equally confident shareholders will be rewarded as a result.

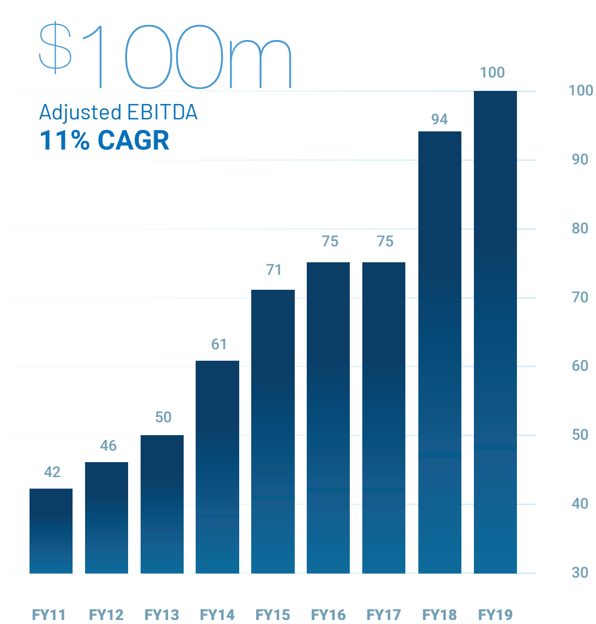
We recently announced a $50 million stock buyback program. We announced this program for a very simple reason – we are confident in the future prospects for Bottomline.

We thank every customer of Bottomline for trusting us to meet their mission critical business payment and technology needs. It is our privilege to do so. We also would like to thank every employee of Bottomline who, regardless of individual role, has personally accepted the responsibility to deliver innovation and delight our customers. You continue to make Bottomline a company that customers want to do business with.

Thank you, our valued shareholders, for the confidence you continue to have in Bottomline.

Robert A. Eberle
Chief Executive Officer





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

FORM 10-K

(Mark One)

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

For the fiscal year ended June 30, 2019
OR

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

For the transition period from __________ to
Commission file number: 0-25259

BOTTOMLINE TECHNOLOGIES (de), INC.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**02-0433294** **(I.R.S. Employer Identification No.)**
325 Corporate Drive **Portsmouth, New Hampshire** **(Address of principal executive offices)**	**03801-6808** **(Zip Code)**

(603) 436-0700
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class:	Trading Symbol(s):	Name of each exchange on which registered:
Common Stock, $.001 par value per share	EPAY	The 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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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 Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting stock held by non-affiliates of the registrant, based on the last sale price of the registrant's common stock at the close of business on December 31, 2018 was $2,023,073,136 (reference is made to Part II, Item 5 herein for a statement of assumptions upon which this calculation is based). The registrant has no non-voting stock.

There were 43,862,347 shares of common stock, $.001 par value per share, of the registrant outstanding as of August 16, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Items 10, 11, 12, 13 and 14 of Part III (except for information required with respect to our executive officers, which is set forth under

"Part I-Item 1. Business-Information about our Executive Officers and Other Key Employees") have been omitted from this report, as we expect to file with the Securities and Exchange Commission, not later than 120 days after the close of our fiscal year ended June 30, 2019, a definitive proxy statement for our 2019 annual meeting of stockholders. The information required by Items 10, 11, 12, 13 and 14 of Part III of this report, which will appear in our definitive proxy statement, is incorporated by reference into this report.

BOTTOMLINE TECHNOLOGIES (de), INC.

FORM 10-K
FOR THE FISCAL YEAR ENDED JUNE 30, 2019
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PART I

This Annual Report on Form 10-K contains forward-looking statements that involve risks and uncertainties. Any statements (including statements to the effect that we believe, expect, anticipate, plan, and similar expressions) that are not statements relating to historical matters should be considered forward-looking statements. Our actual results may differ materially from the results discussed in the forward-looking statements as a result of numerous important factors, including those discussed in *Item 1A. Risk Factors**.*

Item 1. Business.

Our Company

We help make complex business payments simple, smart and secure. Corporations and banks rely on us for domestic and international payments, efficient cash management, automated workflows for payment processing and bill review, and fraud detection, behavioral analytics and regulatory compliance solutions.

We operate settlement networks that facilitate electronic payments and transaction settlement between businesses, their vendors and banks. We offer solutions that banks use to provide payment, cash management and treasury capabilities to their business customers, as well as solutions that financial institutions use to facilitate customer acquisition and to grow profitable customer relationships through intelligent engagement. Our legal spend management solutions help manage and determine the right amount to pay for legal services and claims vendor expenditures for insurance companies and other large consumers of outside legal services, as well as related tools and analytics for the law firms themselves. Corporate customers rely on our solutions to automate payment and accounts payable processes and to streamline and manage the production and retention of electronic documents. We also offer cyber fraud and risk management solutions that are designed to non-invasively monitor and analyze user behavior and payment transactions to flag behavioral and data anomalies and other suspicious activity.

Our solutions are designed to complement, leverage and extend our customers' existing information systems, accounting applications and banking relationships so that they can be deployed quickly and efficiently. To help our customers realize the maximum value from our products and meet their specific business requirements, we also provide professional services for implementation, training, consulting and product enhancement.

Bottomline was originally organized as a New Hampshire corporation in 1989 and was reincorporated as a Delaware corporation in August 1997. We maintain our corporate headquarters in Portsmouth, New Hampshire and our international headquarters in Reading, England. We maintain a website at www.bottomline.com. Our website includes links to our Code of Business Conduct and Ethics, and the charters of our Audit Committee, Leadership Development and Compensation Committee and Nominations and Corporate Governance Committee. We are not including the information contained on our website as part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available free of charge, through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission (SEC). The SEC's website, www.sec.gov, contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Unless the context requires otherwise, references in this Annual Report on Form 10-K to we, us, our, Bottomline and the Company refer to Bottomline Technologies (de), Inc. and its subsidiaries. Our fiscal year ends on June 30, and we sometimes identify our fiscal years in this Annual Report on Form 10-K by the calendar years in which they end. For example, we refer to the fiscal year ended June 30, 2019 as "fiscal year 2019."

Our Strategy

Our objective is to be the leading global provider of business payment technology. Key elements of our strategy include:

- providing solutions that allow businesses to make complex and fragmented payment processes simple, smart and secure;
- delivering an increasingly broad set of feature-rich solutions to provide ease of deployment and efficiency for our customers and increased recurring revenue to us;
- providing an intuitive, easy-to-use/easy-to-navigate experience, accessible via a variety of technology platforms including mobile devices;
- integrating machine learning and predictive analytics technologies to increase the capabilities and effectiveness of our solutions;
- developing innovative new technologies that will allow us to broaden our market footprint, enhance our competitive position in our current markets and capitalize on new market opportunities;
- growing our settlement network solutions by adding customers, strategic partners and new capabilities;
- delivering solutions that enable organizations to adapt to and leverage business payment environmental and regulatory changes such as faster payments, real-time settlement and open banking;
- providing banking solutions that enable banks of all sizes to offer their business customers leading cash management and treasury capabilities as well as solutions that are designed to deepen and grow profitable bank customer relationships;
- attracting and retaining exceptional technical, industry and management talent who have experience in our markets and the capability to grow our business;
- continuing to develop and broaden strategic relationships that enhance our global position; and
- pursuing strategic acquisitions that expand our geographical footprint and market share or extend our product functionality.

Our Products and Services

Following is a summary of our major product offerings, however we continue to innovate and adapt our solutions as standards, customer needs and technology evolves.

Settlement Network Solutions

Paymode-X is an integrated payment solution allowing businesses to easily transition from manual accounts payable payments processes to an overall integrated solution, maximizing cost-savings, efficiency and security. With more than 400,000 member businesses, Paymode-X customers gain immediate benefits because many of their vendors are already part of the Paymode-X network and can begin to be paid electronically on day one. Our vendor enrollment process leverages our proprietary Intelligent Engagement Model which includes predictive analytics and proprietary processes and tools designed to maximize vendor adoption. Our solution leverages known payment type preferences across member businesses in order for customers to settle vendor payments utilizing a mix of card, automated clearing house (ACH), check and wire payments that will yield the greatest financial and efficiency gains. We continually incorporate innovative technologies and features into Paymode-X to make it easier for network members to implement, use and realize value quickly. Examples include the addition of electronic invoicing functionality, robust security features, the inclusion of an application programming interface library, the availability of multiple enterprise resource planning (ERP)-specific connectors that streamline system integration for customers, the incorporation of machine learning and predictive analytics, and the incorporation of voice technology and biometrics into our mobile app. A number of leading financial institutions partner with us to resell Paymode-X capabilities to their corporate clients. We have commercial relationships with both Visa and Mastercard and are able to offer both options to financial institutions as part of an overall Paymode-X solution.

Our financial messaging solutions leverage multiple payment networks and schemes, including SWIFT global messaging, Faster Payments, Single Euro Payments Area (SEPA), BACS and others to allow banks and corporations to exchange financial information, including payment instructions, cash reporting and other messages to facilitate transaction settlement with banks and counterparties around the world. Our financial messaging solutions allow banks and corporations to achieve lower costs, rapid implementation, greater security and improved risk management, while avoiding costly internal infrastructure.

Banking Solutions

Our Digital Banking Intelligent Engagement platform (Digital Banking IQ) empowers banks to intelligently engage with customers, deliver a unified experience and acquire, deepen and grow profitable relationships. Digital Banking IQ combines a 360-degree view of all customer relationships, including the performance and volume of all customer products and services across all channels, which targeted actionable insights powered by machine learning.

We enable banks of all sizes to offer their customers a host of capabilities including ACH and BACS payments, wires, international payments, check production, fraud prevention, customer acquisition, balance and information reporting and other features that facilitate enterprise-wide cash management and interaction with their customers. Digital Banking IQ allows our bank customers to attract and service a full range of client segments from small businesses to multi-nationals. These solutions feature an intuitive user interface designed to simplify all aspects of payments and cash management for customers of all sizes and sophistication, through both browser-based and mobile channels.

Legal Spend Management

Our legal spend management solutions and services integrate with claims management and time and billing systems to automate legal invoice management processes and to provide insight into all areas of a company's outside legal spend. The combination of automated invoice routing and a sophisticated rules engine allows corporate legal and insurance claims departments to create more efficient processes for managing invoices generated by outside law firms and other service providers, while offering insight into important legal spend factors including expense monitoring and outside counsel performance. We continue to expand the capabilities of these offerings to leverage predictive analytics to facilitate the selection and retention of counsel, forecast claim settlement and litigation expense and augment the management and budgeting of litigation matters.

Cyber Fraud and Risk Management

Our cyber fraud and risk management solutions (CFRM) non-invasively monitor, replay and analyze user behavior and payment transactions to flag and even stop suspicious activity in real time. These solutions are highly configurable and create accountability by recording and analyzing each application interaction and screen view, reducing the risk of theft, information leakage, internal fraud and payments fraud, as well as decreasing the cost of regulatory compliance. Case management capabilities centralize risk management, speed investigations, and facilitate compliance with regulations pertaining to Anti Money Laundering (AML), SWIFT CSP, PSD2, FATF16/WTR2, Basel II, the Health Insurance Portability and Accountability Act (HIPAA) and Know Your Customer (KYC).

Payment and Document Automation

Our payment automation solutions generate a wide variety of domestic and international payment instructions along with consolidated bank reporting of cash activity. Our web fraud and security module is designed to identify and track fraudulent activity that occurs in a customer's platform. Our solutions reduce administrative expenses and strengthen compliance and anti-fraud controls. Users are able to gather and access data via the web related to payment and bank account information, including account totals and detailed transaction data, providing improved workflow, financial reporting and bank communications.

Our PTX payments and collections solutions suite offers organizations of any size simple, secure and efficient ways to pay and get paid. The solution can enable businesses to efficiently manage key business processes such as payments, accounts payable and accounts receivable. PTX is designed to incorporate regulatory changes such as the UK New Payments Architecture as well as innovation happening in the payments space such as Open Banking, leveraging these changes to facilitate consolidated views of bank accounts across the world. With new ways to pay including payment initiation service provider and request to pay, PTX is enabling companies to establish new payment relationships with customers.

To augment financial document workflow and delivery, we also offer a number of solutions designed to automate a wide variety of business documents and supply chain processes as well as a related web-based delivery and document archive. Our products offer advanced design, output formatting and delivery capabilities to replace paper-based forms, as well as automating the labor-intensive accounts payable processing of invoices.

Healthcare Solutions

In addition to our payments offerings referred to above, we offer several solutions specifically for healthcare to address patient registration, electronic signature, mobile document, payments and cybersecurity. Our solutions are utilized across the acute care hospital enterprise and broader healthcare systems, accelerating the paper-to-electronic transition while helping our customers streamline data flows and better protect themselves and their patient's data.

Professional Services

Our teams of service professionals draw on extensive payments experience to provide consulting, project implementation and training services. By easing the adoption of our products, these services help our customers accelerate the time to value. By improving the overall customer experience, these services help us retain customers and drive future revenue-generating arrangements from existing customers.

Our Customers

Our customers span multiple industries including banking, financial services, insurance, healthcare, technology, retail, communications, education, media, manufacturing and government. Our customers include leading organizations such as Bank of America Merrill Lynch, Berkley Risk Administrators, British Telecommunications plc., Capital One, Cedars-Sinai, CIBC, Cigna Corporation, Citizens Bank, Cleveland Clinic, Deutsche Bank, Franklin Templeton Investments, Fidelity Investments, HCA Healthcare, HSBC, Johnson Controls, Inc., JPMorgan Chase, Lloyds Bank, Metro Bank, Regions Financial Corporation, Santander Bank, Starling Bank, State Farm Insurance, Tesco Stores Ltd., The Hartford, Vodafone and Zurich American Insurance Company.

Our Competition

The markets in which we participate are highly competitive. We believe our ability to compete depends on factors within and beyond our control, including:

- our ability to develop new, innovative and feature-rich technology solutions that meet the evolving needs of our customers and the shifting dynamics of the markets we participate in;
- our ability to attract and retain employees with the requisite domain knowledge and technical skill set necessary to develop and support our products;
- the performance, reliability, features, ease-of-use and price of our offerings as compared to competitor alternatives;
- our industry knowledge and expertise;
- the execution of our sales and services organizations; and
- the timing and market acceptance of new products as well as enhancements to existing products, by us and by our current and future competitors.

For our settlement network solutions, our principal competitors include AvidXchange, US Bank Payments Plus, CSI Enterprises, C2FO, Bill.com, MineralTree, Inc. and combined card and ACH Solutions from JPMorgan Chase, Wells Fargo, Finastra, Eastnets and SWIFT.

For our banking solutions and cash management solutions, we primarily compete with companies such as ACI Worldwide, Fiserv, FIS, Q2, Jack Henry, Backbase, NCR, MeridianLink and Polaris, which offer a wide range of financial services, including electronic banking applications. We also encounter competition in our banking solution customer acquisition offerings from MeridianLink and Finastra.

For our legal spend management solutions, we compete with a number of companies, including Wolters Kluwer ELM Solutions, LexisNexis, Mitratech, Quovant and DXC Legal Solutions.

For our cyber fraud and risk management products, we primarily compete with NICE Actimize, Norkom, SAS, Guardian Analytics and FairWarning.

For our healthcare solutions, our primary competitors are Access, FairWarning, FormFast, Iatric Systems, Protenus and Taylor Communications.

Our payment and document automation products compete primarily with companies that provide solutions to create, publish, manage and archive electronic documents and companies that offer payments software and services. We also compete with providers of ERP solutions and providers of traditional payment products.

We believe that we compete favorably in each of the markets in which we participate, however the markets for our products and services are intensely competitive and characterized by rapid technological change and a number of factors could adversely affect our ability to compete in the future, including those discussed in *Item 1A. Risk Factors*.

Our Segments

Operating segments are the components of our business for which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. Our chief operating decision maker is our chief executive officer. Our operating segments are generally organized by the type of product or service offered and by geography.

Similar operating segments have been aggregated into four reportable segments as follows:

Cloud Solutions. Our Cloud Solutions segment provides customers with SaaS technology offerings that facilitate electronic payment, electronic invoicing, and spend management. Our legal spend management solutions, which enable customers to create more efficient processes for managing invoices generated by outside law firms while offering insight into important legal spend factors such as expense monitoring and outside counsel performance, are included within this segment. This segment also incorporates our settlement network solutions (financial messaging and Paymode-X). Our settlement network solutions are highly scalable, secure and cost effective and facilitate cash payment and transaction settlement between businesses, their vendors and banks. Revenue within this segment is generally recognized on a subscription or transaction basis or ratably over the contract term.

Banking Solutions. Our Banking Solutions segment provides solutions that are specifically designed for banking and financial institution customers. Our Banking Solutions products are sold predominantly on a hosted basis, with revenue recorded over time. This has the effect of contributing to recurring revenue and the revenue predictability of future periods, but results in revenue recognition over a longer period than a traditional on-premise software license transaction.

Payments and Transactional Documents. Our Payments and Transactional Documents segment supplies financial business process management software solutions, including making and collecting payments, sending and receiving invoices, and generating and storing business documents. This segment also provides a range of standard professional services and equipment and supplies that complement and enhance our core software products. When licensed for on-premise deployment, software license revenue is typically recorded upon delivery of the software and commencement of the license term. In hosted arrangements, we typically record revenue over time. Professional services revenue is normally recorded as we perform the work and software support and maintenance revenue is recorded ratably over the support period.

Other. Our Other segment consists of our healthcare and cyber fraud and risk management solutions. Our cyber fraud and risk management solutions non-invasively monitor, replay and analyze user behavior to flag and even stop suspicious activity in real time. Our healthcare solutions for patient registration, electronic signature, mobile document and payments allow healthcare organizations to improve business efficiencies, reduce costs and improve care quality. Software revenue for perpetual licenses of our cyber fraud and risk management and healthcare products is typically recorded upon delivery of the software and commencement of the license term. Professional services revenue is recorded as we perform the work and software support and maintenance revenue is recorded ratably over the support period which is normally twelve months.

Sales and Marketing

As of June 30, 2019, we employed 411 sales and marketing employees worldwide, of whom 240 were focused on North American markets, 143 were focused on the United Kingdom and continental Europe markets and 28 were focused on Asia-Pacific and Middle East markets. We market and sell our products directly through our sales force and indirectly through a variety of channel partners and reseller relationships. We market and sell our products domestically and internationally, with an international focus on the United Kingdom and continental Europe.

Product Development and Engineering

Our product development and engineering organization includes employees as well as strategic development partners who provide a flexible supplement to our internal resources. We have three primary development groups: product design and user experience, software engineering and quality assurance. Our teams work collaboratively, integrating design thinking approaches with development operations and scaled agile practices, to deliver validated solutions to our customers. We expensed $67.4 million, $57.5 million and $53.1 million in product development and engineering costs in fiscal years 2019, 2018 and 2017, respectively. In fiscal year 2020 we expect product development and engineering costs to increase as we continue to enhance our products and develop new, innovative, feature-rich solutions.

Our product design and user experience team is extensively involved in the design of all of our products, driving the user-centered design process to ensure elegant, engaging and intuitive, easy-to-use products. Part of this process is user experience testing that is conducted to provide additional productivity gains for the end user.

Our software engineers have substantial experience in advanced software development techniques as well as extensive knowledge of the complex processes involved in business document workflow, cash management, payment and invoicing applications. They maintain extensive knowledge of software development trends and best practices, including management of iterative development cycles and lean UX approaches to obtain customer feedback as early as possible. Our technologies focus on providing business solutions utilizing industry standards, providing a path for extendibility and scalability of our products. The team focused on applying relevant technologies to uniquely make our customers more successful. Security, control and fraud prevention, as well as performance, data management and resource efficiencies are priorities in the solutions we develop and deploy.

Our quality assurance engineers have extensive knowledge of our products and expertise in software quality assurance techniques. The quality assurance team participates in all phases of our product development processes. Members of the quality assurance group make use of both manual and automated software testing techniques to ensure high-quality software is being delivered to our customers. The quality assurance group members participate in alpha and beta releases, testing of new product releases and performance and security testing for our products. Our process promotes an end-to-end design to delivery pipeline view that connects these critical product development and engineering functions to our product management, delivery, operations and support organizations so that all share a common vision of customer-focused success.

Proprietary Rights

We use a combination of patents, copyrights, trademarks and trade secret laws to help establish and protect our proprietary rights in our technology and products. During fiscal year 2019, we added 3 patents to our portfolio. In total, we currently hold 36 U.S. patents as well as 8 foreign equivalent patents in Europe, Israel and India. We expect to receive other patents and we have 19 applications pending before the U.S. Patent and Trademark Office. The earliest year of expiration of any of our remaining patents is 2019.

We intend to continue to file patent applications as we identify patentable technology. There can be no assurance, however, that our existing patent applications, or others that we may file in the future, will issue or will be of sufficient scope and strength to provide meaningful protection to our technology or any commercial advantage to us, or that the issued patents will not be challenged, invalidated or circumvented. In addition, we rely upon a combination of copyright and trademark laws and non-disclosure and other intellectual property contractual arrangements to help protect our proprietary rights. Given the rapidly changing nature of the industry's technology, the creative abilities of our development, marketing and service personnel may be as or more important to our competitive position as are the legal protections and rights afforded by patents. We enter into agreements with our employees and clients that seek to limit and protect our intellectual property and the distribution of proprietary information. However, there can be no assurance that the steps we have taken to protect our intellectual property will be adequate to deter misappropriation of proprietary information and we may not be able to detect unauthorized use and take appropriate steps to enforce our proprietary rights.

Government Regulation

Our U.S. chartered financial institution customers are federally regulated by either the Federal Reserve (FED), the Federal Deposit Insurance Corporation (FDIC), the Office of the Comptroller of the Currency (OCC), the National Credit Union Association (NCUA) or the Consumer Financial Protection Bureau (CFPB). Our non U.S. based financial institution customers are normally subject to a similar regulatory oversight within their respective country of domicile. We are subject to periodic examination by the Federal Financial Institutions Examination Council (FFIEC) interagency in our capacity as a technical financial service provider, during which our operating practices are risk-assessed and compared against applicable laws and regulations. If as part of such an examination we were to receive a material unfavorable regulatory rating, our customers may be advised by their direct federal regulators to reassess their commercial relationships with us, including the continued use of our products.

Each of our operating segments provides services and/or products that may be subject to various federal, state or foreign laws or regulations, particularly in the area of data security and privacy. These laws and regulations govern the collection, processing, storage, use and disclosure of personal information as well as notification requirements in the event of security breaches. We are subject to periodic General Data Protection Regulation (GDPR) compliance examinations by the Information Commissioner Office (ICO) and the Financial Conduct Authority (FCA) in our capacity as a technical financial service provider processing and/or storing financial data within a European Union (EU) and/or European Economic Area (EEA) country. The legal and regulatory framework in these areas is complex and continually evolving, particularly with respect to data security, payment technology and payment methodologies. We may become subject to new or increased regulation in the future, and the cost of complying with current or future regulatory requirements could be significant. Our products and services must be designed to work effectively within this legal framework and the regulatory framework that our customers operate within.

Employees

As of June 30, 2019, we had approximately 1,900 full-time employees. None of our employees are represented by a labor union. We have not experienced any work stoppages and we believe that employee relationships are good. Our future success will depend in part on our continued ability to attract, retain and motivate highly-qualified technical and managerial personnel in a very competitive market.

Information about our Executive Officers and Other Key Employees

Our executive officers and other key employees and their respective ages as of August 29, 2019, are as follows:

Name	Age	Positions
Robert A. Eberle	58	President, Chief Executive Officer and Director
Richard D. Booth	50	Chief Financial Officer and Treasurer
Norman J. DeLuca	59	Managing Director, Banking Solutions
Paul J. Fannon	51	Deputy Managing Director, EMEA
John F. Kelly	62	General Manager, Legal Solutions
Stephanie B. Lucey	45	Chief People Officer
John J. Mason	49	Chief Information Officer
Brian S. McLaughlin	55	Chief Experience Officer
Andrew J. Mintzer	57	Executive Vice President, Product Strategy and Customer Delivery
Jessica Pincomb Moran	45	General Manager, Paymode-X Business Solutions
Eric K. Morgan	49	Executive Vice President, Global Controller
Christine M. Nurnberger	40	Chief Marketing Officer
Nigel K. Savory	52	Managing Director, Europe
David G. Sweet	56	Executive Vice President, Strategy and Corporate Development

Robert A. Eberle has served as a director since September 2000, as President since August 2004 and as Chief Executive Officer since November 2006.

Richard D. Booth has served as Chief Financial Officer and Treasurer since April 2015. Mr. Booth served as Vice President and Corporate Controller at Sapient Corporation from January 2014 to March 2015. From November 2012 through January 2014, Mr. Booth served as Vice President Financial Planning and Analysis at Nuance Communications and as Vice President and Assistant Corporate Controller from July 2009 through November 2012.

Norman J. DeLuca has served as Managing Director, Banking Solutions since November 2011. From October 2009 through October 2011, Mr. DeLuca served as Managing Partner at NMD Investments. From January 2008 through October 2009, Mr. DeLuca served as Chief Executive of RBS Global Transaction Services, Americas. From January 2007 through January 2008, Mr. DeLuca served as Vice Chairman, RBS Citizens Financial Group.

Paul J. Fannon has served as Deputy Managing Director, EMEA, since February 2018. From October 2008 through January 2018, Mr. Fannon served as Group Sales Director, Europe.

John F. Kelly has served as General Manager, Legal Solutions since April 2011. From January 2006 through April 2011, Mr. Kelly served as Chief Executive Officer of Allegient Systems, Inc.

Stephanie B. Lucey has served as Chief People Officer since April 2018. From November 2016 through April 2018, Ms. Lucey served as Senior Vice President of Human Resources at Clicksoftware. From August 2015 through November 2016, Ms. Lucey served as Vice President of Human Resources at Everbridge. From March 2014 through August 2015, Ms. Lucey served as Head of HR at Vistaprint. From July 2012 through March 2014, Ms. Lucey served as Senior Director of Business Partnerships at Vistaprint.

John J. Mason has served as Chief Information Officer since June 2010. From March 2009 through June 2010, Mr. Mason served as Vice President of Information Technology at Anacomp, Inc.

Brian S. McLaughlin has served as Chief Experience Officer since November 2016 and as Vice President of Product Design and User Experience from February 2011 through October 2016. From 2009 through February 2011, Mr. McLaughlin served as Director of User Experience at CashStar, Inc.

Andrew J. Mintzer has served as Executive Vice President, Product Strategy and Delivery since July 2013 and as Senior Vice President, Product Strategy and Delivery from November 2007 through June 2013.

Jessica Pincomb Moran has served as General Manager, Paymode-X Business Solutions since June 2015 and Vice President, Client Services from June 2011 through May 2015. From February 2008 through May 2011, Ms. Moran served as Vice President, Corporate Services.

Eric K. Morgan has served as Controller since September 2000.

Christine M. Nurnberger has served as Chief Marketing Officer since September 2014. Ms. Nurnberger served as Vice President, Marketing for SunGard Availability Services from January 2012 until August 2014 and as Vice President, Global Marketing Operations for Info Global Solutions from November 2005 until January 2012.

Nigel K. Savory has served as Managing Director, Europe since December 2003.

David G. Sweet has served as Executive Vice President, Strategy and Corporate Development since March 2013. From October 2010 through October 2012, Mr. Sweet served as a strategy and business development executive for IBM's Enterprise Marketing Management group. From April 2005 through October 2010, Mr. Sweet served as Senior Vice President of Corporate Development at Unica Corporation.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. The discussion below addresses the most significant factors, of which we are currently aware, that could affect our business, operating results and financial condition. You should carefully consider the risks and uncertainties described below before making an investment decision involving our common stock. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties may also impact our business operations.

If any of the following risks actually occur, our business, financial condition or results of operations would likely suffer. In that case, the trading price of our common stock could fall, and you may lose all or part of the money you paid to buy our common stock.

Risks Related To Our Business

The markets in which we compete are extremely competitive and we may not be able to compete effectively

The markets in which we compete are intensely competitive and characterized by rapid technological change. There is no assurance that we will be able to maintain our current market share or our customer base.

We compete with a wide range of companies ranging from small start-up enterprises with limited resources, which we compete with principally on the basis of technology features or specific customer relationships, to very large companies which can leverage significantly larger customer bases and greater financial resources. Many of our competitors have longer operating histories, significantly greater financial, technical, and sales and marketing resources, greater brand recognition and a larger customer base than we do. We anticipate that the markets in which we compete will continue to attract new competitors and new technologies and we may not be able to compete successfully with them.

To compete successfully, we need to maintain a successful research and development function. If we fail to enhance our current products and develop new, innovative solutions or if we fail to bring new solutions to market quickly enough, our products could become less competitive or obsolete.

We continue to make significant investments in our existing products and our new product offerings, which may adversely affect our operating results or may not be successful

Given the highly competitive and rapidly evolving technology environment we operate within, we believe that it is important to constantly enhance our existing product offerings as well as to develop new product offerings to meet strategic opportunities as they evolve. This includes developing and enhancing our products to include what we believe is necessary to meet the future needs of our customers.

Our operating results have consistently been affected by increases in product development expenses as we have continued to make investments in our products and as we have funded new product innovation based on the market opportunities we see. We expect to continue to make investments in product innovation and may at any time, based on product need or marketplace demand, decide to significantly increase our product development expenditures.

Investments in existing products and new product offerings can have a negative impact on our operating results and any new product enhancement or offering may not be accepted in the marketplace or generate material revenues for us. Any significant changes in revenue estimates relating to software development costs we have capitalized could also result in the write-off of previously capitalized costs.

Weakness or deterioration in domestic and global economic conditions could have a significant adverse impact on our business, financial condition and operating results

Our business, financial condition and operating results are significantly affected by general economic conditions. Economic weakness or any downturn in the U.S. or global economies could result in a variety of risks to our business, including:

- increased volatility in our stock price;
- increased volatility in foreign currency exchange rates;
- delays in, or curtailment of, purchasing decisions by our customers or potential customers either as a result of continuing economic uncertainty or as a result of their inability to access the liquidity necessary to engage in purchasing initiatives;
- pricing pressures for our products and services, including reductions in the duration or renewal rates for our subscription contracts and software maintenance contracts;
- increased credit risk associated with our customers or potential customers, particularly those that may operate in industries or geographic regions most affected by the economic downturn; and
- impairment of our goodwill or other assets.

To the extent that economic conditions become uncertain or deteriorate, or any of the above risks occur, our business and operating results could be significantly and adversely affected.

Acquisitions could disrupt our business and harm our financial condition

An active acquisition program has been an important element of our corporate strategy. We have been an acquisitive company historically, and we expect to continue to make acquisitions in the future. Any acquisition or strategic investment we have made or may make in the future may entail numerous risks, including the following:

- difficulties integrating acquired operations, personnel, technologies or products;
- entrance into markets and operating geographies in which we have no or limited prior experience or knowledge;
- failure to realize anticipated revenue increases for any number of reasons, including if a larger than expected number of acquired customers decline to renew software maintenance contracts or subscription based contracts, if we are unsuccessful in selling the acquired products into our existing customer base or if the terms of the acquired contracts do not permit us to recognize revenue on a timely basis;
- costs incurred to combine the operations of companies we acquire, such as integration costs, transitional employee expenses and employee retention or relocation expenses, may be higher than expected;
- regulatory challenges that may arise prior to or after an acquisition, such as related to governmental review of competition and anti-trust considerations, such as is the case with an acquisition we completed in the UK in March 2019 for which an anti-competition review is ongoing;

- write-offs related to existing or acquired assets such as deferred tax assets, goodwill or other intangible assets;
- inability to retain key personnel of the acquired company;
- inadequacy of existing operating, financial and management information systems to support the combined organization, including the difficulty in integrating an acquired company's accounting, financial reporting and other administrative systems to permit effective management;
- difficulties implementing controls, procedures and policies appropriate for a public company at companies that, prior to the acquisition, may have lacked such controls, policies and procedures;
- in the case of foreign acquisitions, challenges integrating operations across different cultures and languages and addressing the particular regulatory, economic, currency and political risks associated with different countries or regions;
- diversion of management's focus from our core business concerns;
- dilution to existing stockholders and our earnings per share;
- incurrence of substantial debt;
- exposure to litigation from third parties, including claims related to intellectual property or other assets acquired or liabilities assumed; and
- failure to realize anticipated benefits of the acquisition due to the above factors or other factors.

There can be no assurance that our acquired businesses will fully integrate successfully or that all future potential benefits will be realized. Any such difficulties encountered as a result of any merger, acquisition or strategic investment could have a material adverse effect on our business, operating results and financial condition.

As a result of our acquisitions, we could be subject to significant future write-offs with respect to intangible assets, which may adversely affect our future operating results

The carrying value of our intangible assets, including goodwill, represents a significant portion of our total assets at June 30, 2019. We periodically review our goodwill and our other intangible assets for impairment and could, in any future period, be subject to impairment charges with respect to these assets or intangible assets arising as a result of acquisitions in future periods. Any such charges, to the extent occurring, would likely have a material adverse effect on our operating results.

We face risks associated with our international operations that could harm our financial condition and results of operations

A significant percentage of our revenues have been generated by our international operations, and our future growth rates and success are in part dependent on our continued growth and success in international markets. As is the case with most international operations, the success and profitability of these operations are subject to numerous risks and uncertainties that include, in addition to the risks our business as a whole faces, the following:

- currency exchange rate fluctuations, particularly with the British Pound Sterling, the Swiss Franc, the European Euro and the Israeli Shekel;
- difficulties and costs of staffing and managing foreign operations;
- differing regulatory and industry standards and certification requirements;
- the complexities of tax laws in foreign jurisdictions;
- the complexities of foreign data privacy laws and regulations;

- the complexities of various sanctions regimes and related commercial restrictions;
- reduced protection for intellectual property rights in some countries; and
- import or export licensing requirements.

The formal notification by the United Kingdom (UK) of its intention to withdraw from the European Union (EU) (referred to as Brexit), could create disruption and uncertainty to our business, including our relationships with our existing and future customers, suppliers and employees, which could have an adverse effect on our business, financial results and operations

In connection with Brexit, the British government is negotiating the future terms of the UK's relationship with the EU, including the terms of trade between the UK and the EU. The ultimate effects of Brexit will depend on any agreements the UK makes to retain access to EU markets, either during a transitional period or more permanently, and could potentially disrupt the markets we serve and the tax jurisdictions in which we operate. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the UK determines which EU laws to replace or replicate. Remaining EU member countries may also seek to make it more difficult for us to trade effectively or competitively in those regions.

The UK had a period of a maximum of two years from the date of its formal notification to negotiate the terms of its withdrawal from, and future relationship with, the EU. If no formal withdrawal agreement could be reached between the UK and the EU, then the UK's membership of the EU was to automatically terminate on March 29, 2019. That deadline has been extended to October 31, 2019 to provide additional time for the parties to negotiate a withdrawal agreement. However, based on the limited progress to date in these negotiations, there is a possibility that the UK will leave the EU without a withdrawal agreement and associated transition period in place, which is likely to cause significant market and economic disruption.

The lack of a formalized and orderly process for the UK's exit from the EU, to the extent occurring, could create uncertainty and challenges (particularly in the near term) with respect to trading relationships between our UK subsidiary and other EU nations. Further, following the UK's exit from the EU, there could be divergent or unreconciled positions in respect of other regulatory areas such as employment law or data privacy, which could create additional uncertainty and challenges for us.

We are subject to the political, economic and security conditions in Israel

We have a subsidiary headquartered in Tel Aviv, Israel. Since the establishment of the State of Israel, a number of armed conflicts have taken place between Israel and its neighbors. In the past, Israel has experienced periodic armed conflicts which at times have disrupted day-to-day civilian activity in Israel.

There can be no assurance that future conflicts will not occur and that such conflicts will not affect our premises or major infrastructure and transport facilities in the country, which could have an adverse effect on our ability to conduct business in Israel. In addition, acts of terrorism, armed conflicts or political instability in the region could negatively affect global as well as local economic conditions and adversely impact our operating results.

Our business and operating results are subject to fluctuations in foreign currency exchange rates

We conduct a substantial portion of our operations outside of the U.S., principally in the UK and in continental Europe and, to a lesser extent, in the Asia-Pacific and Middle East regions. During the twelve months ended June 30, 2019, approximately 38% of our revenues and 42% of our operating expenses were attributable to customers or operations located outside of North America. During the twelve months ended June 30, 2019 as compared to the twelve months ended June 30, 2018, the foreign currency exchange rates of both the Swiss Franc and British Pound Sterling depreciated against the U.S. Dollar. Future appreciation of the U.S. Dollar against the foreign currencies in which our international operations are denominated will have the impact of reducing both our revenues and operating expenses associated with our operations in those regions.

Our future financial results will be affected by our success in continuing to sell our products in a subscription and transaction model, which carries with it certain risks

We offer a growing number of products under a subscription and transaction based revenue model. We believe a subscription based revenue model has certain advantages over a perpetual license model, including better predictability of revenue; however, it also presents a number of risks to us including the following:

- arrangements entered into on a subscription basis generally delay the timing of revenue recognition and can require the incurrence of up-front costs, which may be significant;
- subscription based revenue arrangements often include specific performance requirements or service levels that we may be unable to consistently achieve, subjecting us to penalties or other costs. A material breach of these arrangements by us, such as a persistent failure to achieve required service levels, might permit the customer to exit the contract prior to its expiration, without additional compensation to us;
- customer retention is critical to our future growth rates. Customers in a subscription arrangement may elect not to renew their contract upon expiration, or they may attempt to renegotiate pricing or other contractual terms at the point of (or prior to) renewal on terms that are less favorable to us; and
- there is no assurance that the solutions we offer on a subscription basis, including new revenue models or new products that we may introduce, will receive broad marketplace acceptance.

Because we recognize subscription revenue from our customers over the term of their agreements, downturns or upturns in sales of our subscription based offerings will not be immediately reflected in our operating results and may adversely affect revenue in the future

We recognize subscription revenue over the term of our customer agreements. As a result, most of our subscription revenue arises from agreements entered into during previous periods. A shortfall in orders for our subscription based solutions in any one period would most likely not significantly reduce our subscription revenue for that period, but could adversely affect the revenue contribution in future periods. In addition, we may be unable to quickly reduce our cost structure in response to a decrease in these orders. Accordingly, the effect of downturns in sales of our subscription based solutions will not be fully reflected in our operating results until future periods. A subscription revenue model also makes it difficult for us to rapidly increase our revenue through additional subscription sales in any one period, as revenue is generally recognized over a longer period.

If our products and services do not comply with laws, regulations and industry standards to which we and our customers are subject, our business could be adversely affected

Our software products and SaaS offerings facilitate the transmission of cash, business documents and confidential information including, in some cases, personally identifiable information related to individuals and corporations. Our software products and certain of our SaaS offerings store and transmit this data electronically, and therefore our products must operate within the laws, regulations and industry standards regarding security, data protection and electronic commerce. There has been an increased global regulatory focus on privacy issues with respect to the handling of personal information, such as the EU's General Data Protection Regulation. While we believe that our products comply with current regulatory requirements, the interpretation and application of these requirements continues to evolve and may evolve in ways that we cannot predict; so there can be no assurance that future legal or regulatory actions will not adversely impact us. To the extent that current or future regulatory or legal developments mandate a change in any of our products or services, require us or our customers to comply with any industry specific licensing or compliance requirements, alter the demand for or the competitive environment of our products and services or require us to make material changes to how we operate our business, including any changes to our internal operating, financial or management information systems, we might not be able to respond to such requirements in a timely or cost effective manner. If this were to occur, our business, operating results and financial condition could be materially adversely affected.

Failure to comply with the regulations provided by the Financial Conduct Authority (FCA) for certain of our UK operations could adversely impact our business

Bottomline Payment Services Limited is subject to the regulatory framework of the FCA. This component of our operations involves holding and disbursing client funds. The FCA has significant enforcement authority which includes, but is not limited to, withdrawing an organization's authorization, issuing fines and suspending firms from carrying out regulated activities. While we believe we have appropriate controls and procedures around these operations, any failure to comply with FCA requirements may result in disciplinary actions that could have a material adverse effect on our business, operating results and financial condition.

A cyber-attack or security or data breach could have an adverse effect on our business

In the course of providing services to our customers we collect, store, process and transmit highly sensitive and confidential information. We rely on our employees and certain third parties in our current operations who may, as a result of human error or misconduct, expose us to operational risk. Certain of our solutions also facilitate the actual transfer of cash or transmit instructions that initiate cash transfer. Our products and services, particularly our SaaS and Web-based offerings, may be vulnerable to unauthorized access, computer viruses, cyber-attacks, distributed denial of service attacks and other disruptive problems, which could result in the theft, destruction or misappropriation of confidential information. Security risks in recent years have increased significantly given the increased sophistication and activities of hackers, organized crime, including state-sponsored organizations and nation-states, and other external parties. Cyber threats are rapidly evolving, increasing the difficulty of defending against them. Targeted social engineering attacks are becoming more sophisticated and are extremely difficult to prevent. The techniques used by bad actors change frequently and may not be recognized until well after a breach has occurred. In addition, employees, customers and other counterparties who may access our network increasingly use personal mobile devices or computing devices that are outside of our network and control environments and are subject to their own cyber-security risks. Breaches of our network could disrupt our internal systems and business applications, including services provided to our customers. Additionally, data breaches could compromise technical and proprietary information, harming our competitive position. We spend significant capital and allocate significant resources to ensure effective ongoing protection against the threat of security breaches and these amounts might ultimately prove inadequate. Despite our efforts, a security breach or computer virus could still occur, which could have a significant negative impact on our business, including reputational harm, the loss of customers and material financial liability to us.

Defects or disruptions in our products or services could diminish demand for our solutions and have a material adverse effect on our future financial results

Our software products are complex. Despite testing prior to their release and throughout the lifecycle of a product or service, software and SaaS offerings often contain undetected errors or defects that can impact their function, performance and security. Any unanticipated performance problems or defects in our products or services could result in additional development costs, diversion of technical and other resources from our other development efforts, service disruptions for our SaaS offerings, negative publicity and reputational harm to us and our products and exposure to potential liability claims. As a result, any error or defect in our products or services could adversely affect our future financial results.

The failure of our cyber fraud and risk management products to prevent a security breach or detect cyber fraud, or the failure of our customers to take action based on the risks identified by these products, could harm our reputation and adversely impact our operating results

Our cyber fraud and risk management products provide our customers the ability to configure a multitude of settings and establish certain rule-based alerts, and it is possible that a customer could misconfigure these products or fail to configure these products in an optimal manner, which could cause threats to go undetected. Similarly, if our cyber fraud and risk management products detect threats or otherwise alert a customer to suspicious activity but the customer does not take action to investigate those threats or alerts, customers may erroneously believe that our products were not effective.

Any real or perceived defects, errors or vulnerabilities in our cyber fraud and risk management products or any failure of these products to prevent, detect or alert a customer to a threat could result in:

- a loss of customers or potential customers;
- delayed or lost revenue and harm to our financial condition and results of operations;
- a delay in attaining, or the failure to attain, market acceptance for our cyber fraud and risk management solutions;
- an increase in warranty claims;
- harm to our reputation; or
- litigation, regulatory inquiries or investigations that may be expensive and that would further harm our reputation.

Catastrophic events may disrupt our business, including our third party data centers

We are a highly-automated business and we rely on our network infrastructure, various software applications and many internal technology systems and data networks for our customer support, development, sales and marketing and accounting and finance functions. Further, our SaaS offerings provide services to our customers from third party data center facilities in different U.S. and international locations over which we have no control. A disruption or failure of these systems or data centers in the event of a natural disaster, telecommunications failure, power outage, cyber-attack, war, terrorist attack, or other catastrophic event could cause system interruptions, reputational harm, delays in product development, breaches of data security and loss of critical data. Such an event could also prevent us from fulfilling customer orders or maintaining certain service level requirements, particularly in respect of our SaaS offerings. While we have developed certain disaster recovery plans and maintain backup systems to reduce the potentially adverse effect of such events, a catastrophic event that resulted in the destruction or disruption of any of our data centers or our critical business or information technology systems would likely severely affect our ability to conduct normal business operations, particularly in the short-term and, as a result, our business, operating results and financial condition could be adversely affected.

We could incur substantial costs resulting from warranty claims or product liability claims

Our product agreements typically contain provisions that afford customers a degree of warranty protection in the event that our products fail to conform to written specifications. These agreements normally contain provisions intended to limit the nature and extent of our risk of warranty and product liability claims. A court, however, might interpret these terms in a limited way or conclude that part or all of these terms are unenforceable. Furthermore, some of our agreements are governed by non-U.S. law, and there is a risk that foreign law might provide us less or different protection. While we maintain general liability insurance, including coverage for errors and omissions, we cannot be sure that our existing coverage will continue to be available on reasonable terms or will be available in amounts sufficient to cover one or more large claims.

A warranty or product liability claim, whether or not meritorious, could harm our reputation, result in substantial financial costs or divert management’s attention, which could have an adverse effect on our business, operating results and financial condition.

We rely on certain third-party hardware and software which could cause errors, interruptions or failures to our solutions or be difficult to replace

We rely on third party hardware and software to deliver certain of our solutions. These third party products may not continue to be available to us on commercially reasonable terms, or at all. The loss of the right to use any of these products could result in delays in our ability to provide our solutions until equivalent technology is either developed by us or acquired from another third party, if available, which may not be possible on a cost-effective basis. In addition, errors or defects in third-party products used in conjunction with our solutions could adversely affect the operation of our products.

We could be adversely affected if we are unable to protect our proprietary technology and could be subject to litigation regarding intellectual property rights, which could cause serious harm to our business

We rely upon a combination of patent, copyright and trademark laws and non-disclosure and other intellectual property contractual arrangements to protect our proprietary rights. However, there is no assurance that our patents, pending applications for patents that may issue in the future, or other intellectual property will be of sufficient scope and strength to provide meaningful protection for our technology or any commercial advantage to us. Further, we cannot be certain that our patents will not be challenged, invalidated or circumvented. We enter into agreements with our employees and customers that seek to limit and protect the distribution of proprietary information. Despite our efforts to safeguard and maintain our proprietary rights, there is no assurance that such rights will remain protected or that we will be able to detect unauthorized use and take appropriate steps to enforce our intellectual property rights.

Litigation involving patents and other intellectual property rights is common in the United States and in other countries where we operate. We may be a party to litigation in the future to protect our intellectual property rights or as a result of an alleged infringement of the intellectual property rights of others. Any such claims, whether or not meritorious, could result in reputational harm to us, require us to spend significant sums in litigation costs or damages, delay product implementations, or require us to develop non-infringing intellectual property or acquire licenses to intellectual property that is the subject of the infringement claim. In addition, under many of our customer contracts, we are required to indemnify our customers for third-party intellectual property infringement claims, which would increase the costs to us of any such claims. These claims could have a material adverse effect on our business, operating results and financial condition.

Our ability to attract and retain qualified employees is critical to the success of our business and failure to do so could adversely affect our operating results

Our success depends upon the efforts and abilities of our executive officers and technical and sales employees who are skilled in e-commerce, payment methodology and regulation, business banking technologies, and web, database and network technologies. Our success and future growth depends to a significant degree on the skills and continued services of our management team. Our current key employees and employees whom we seek to hire in order to support our growth are in high demand within the marketplace. The loss of one or more of our key employees or our failure to consistently attract and retain sufficient qualified employees to grow our operations could have a material adverse effect on our business. We do not maintain key man life insurance policies on any of our employees and our employees are generally free to terminate their employment with us at any time. The loss of the services of any of our executive officers or other key employees could have a material adverse effect on our business, operating results and financial condition.

We engage off-shore development resources which may not be successful and which may put our intellectual property at risk

In order to optimize our research and development capabilities and to meet development timeframes, we contract with off-shore third-party vendors for certain development activities. While our experience to date with these resources has been positive, there are a number of risks associated with off-shore development activities including:

- less efficient and less accurate communication and information flow as a consequence of time, distance and language barriers between our primary development organization and the off-shore resources, resulting in delays or deficiencies in development efforts;
- disruption due to political or military conflicts;
- misappropriation of intellectual property, which we may not readily detect; and
- currency exchange rate fluctuations that could adversely impact the cost advantages intended from these agreements.

To the extent that these or unforeseen risks occur, our operating results and financial condition could be adversely impacted.

We may have larger than anticipated tax liabilities

The determination of our provision for income taxes requires significant judgment and estimation and there are transactions and calculations where the ultimate tax determination is uncertain. We are subject to tax in multiple U.S. and foreign tax jurisdictions and the determination of our tax liability is always subject to audit and review by the applicable domestic or foreign taxing authority. In light of fiscal challenges in U.S. federal and state governments and in many international locations, taxing authorities are increasingly focused on ways to increase revenues which may make resolving tax disputes more difficult. We are regularly under audit by tax authorities in different jurisdictions. While we have established tax reserves using assumptions and estimates that we believe to be reasonable, these reserves may prove insufficient in the event that a taxing authority asserts a tax position that is contrary to our position.

Changes in financial accounting standards may cause unexpected financial reporting fluctuations and affect our reported results of operations

Changes in accounting standards or practices could adversely affect our reported results of operations. New accounting pronouncements, such as the changes in U.S. GAAP related to revenue recognition and accounting for lease arrangements, and varying interpretations of accounting pronouncements, have occurred and will undoubtedly occur in the future. Changes to existing accounting rules or practices may materially affect our reported results of operations or the way we conduct our business in future periods.

If we fail to maintain appropriate and effective internal control over financial reporting, our ability to produce accurate and timely financial statements could be impaired which could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that we re-evaluate regularly. Our internal controls over financial reporting are designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. GAAP. However, despite our efforts, any failure to maintain or implement the necessary internal controls could cause us to fail to meet our financial reporting obligations or result in misstatements in our financial statements, either of which could cause investors to lose confidence in our reported financial information and lead to a decline in the trading price of our common stock.

In fiscal year 2018, we completed the first phase of our implementation of a complex, company-wide, enterprise resource planning (ERP) system. In fiscal year 2019, we largely completed the second phase of this implementation which was designed to modify our existing ERP in conjunction with the adoption of the new revenue recognition standard. If we experience significant operating problems as a result of our implementation, it could adversely affect our business and results of operations

To comply with the accounting standard update which provides for new revenue recognition guidance that began in the first quarter of fiscal year 2019, we significantly modified and enhanced our existing ERP system. ERP implementations are inherently complex and time-consuming projects that involve substantial expenditures on system software, implementation activities and business process reengineering. Any unexpected challenge or performance issue associated with the modification of our existing ERP system could adversely affect our financial reporting systems and processes and our ability to timely and accurately report financial information, including our ability to furnish our quarterly and annual reports with the SEC. Data accuracy problems or other issues may occur which, if not corrected quickly, could impact our business or financial results. In addition, we may experience periodic or prolonged disruption to our financial functions arising from this implementation, including adverse effects on our internal controls over financial reporting. If we encounter unforeseen problems with our financial systems, our business, operations and overall system of internal controls could be adversely affected.

Risks Related to our Indebtedness

We are party to a credit agreement with Bank of America, N.A. and certain other lenders which provides for a revolving credit facility in the amount of up to $300 million (the Credit Facility) through July 16, 2023. At June 30, 2019 we owed $110 million under the Credit Facility.

Our level of indebtedness may limit our financial flexibility

Our level of indebtedness affects our operations in several ways, including:

- a portion of our cash flows from operating activities must be used to service our indebtedness and is not available for other purposes;
- we may be at a competitive disadvantage as compared to similar companies that have less debt; and
- additional financing in the future for working capital, capital expenditures, acquisitions, general corporate or other purposes may have higher costs and contain restrictive covenants, or may not be available to us.

The factors that will affect our ability to obtain additional financing may be beyond our control and include financial market conditions, the value of our assets and our performance at the time we need financing.

The credit agreement contains financial and other covenants, and our failure to comply with any of those covenants could materially adversely impact us or limit or eliminate our ability to access funds under the Credit Facility

The credit agreement requires us to comply with certain financial covenants. Our ability to meet those financial covenants can be affected by events beyond our control, and while at June 30, 2019 we were in compliance with those covenants, we may fail to maintain compliance in future periods. The credit agreement contains customary representations, warranties and covenants including, but not limited to, material adverse events, specified restrictions on indebtedness, liens, investments, acquisitions, sales of assets, dividends and other restricted payments, and transactions with affiliates. These restrictions could place us at a disadvantage relative to our competitors that are not subject to such limitations. A breach of any of these covenants or restrictions could result in an event of default under the credit agreement. Upon the occurrence of an event of default, the lenders could elect to declare all amounts outstanding under the Credit Facility, together with accrued interest, to be immediately due and payable. If we were unable to repay those amounts, the lenders could seek recovery against our assets, including any collateral granted to them to secure the indebtedness. If the lenders under the Credit Facility were to accelerate the payment of any indebtedness, we cannot assure you that our assets would be sufficient to satisfy our obligations.

Our variable rate could cause our debt service obligations to increase or decrease based on changes in market rates

Borrowings under the Credit Facility are at variable rates of interest and expose us to interest rate risk. If interest rates were to increase, our debt service obligations on the variable rate indebtedness would increase even though the amount borrowed remained the same, and our net income and cash flows, including cash available for servicing our indebtedness, would correspondingly decrease. We have entered into interest rate swap agreements intended to mitigate interest rate volatility arising from the Credit Facility, however, the interest rate swaps and any additional interest rate swap we may enter into in the future might not fully mitigate our variable interest rate risk.

Changes to and replacement of the LIBOR benchmark interest rate could adversely affect our business, financial results and operation

In July 2017, the Financial Conduct Authority (the regulatory authority over LIBOR) stated they will plan for a phase out of regulatory oversight of LIBOR interest rate indices after 2021 to allow for an orderly transition to an alternate reference rate. The Alternative Reference Rates Committee (ARRC) has proposed that the Secured Overnight Financing Rate (SOFR) is the rate that represents the best alternative to LIBOR for derivatives and other financial contracts that are currently indexed to LIBOR. The ARRC has proposed a market transition plan to SOFR from LIBOR. We are evaluating the potential impact of the eventual replacement of the LIBOR benchmark interest rate, including the possibility of SOFR as the dominant replacement. The market transition away from LIBOR towards SOFR is expected to be complicated. There can be no guarantee that SOFR will become a widely accepted benchmark in place of LIBOR. Borrowings under our Credit Facility, as hedged by our interest swaps, are indexed to LIBOR. It is uncertain at this time, what the impact of a possible transition to SOFR may be on our business, financial results and operations.

Risks Related To Owning Our Common Stock

Our common stock has experienced and may continue to undergo significant market price fluctuations

The market price of our common stock has recently experienced and may continue to experience significant fluctuations due to a variety of factors, including:

- general and industry-specific business, economic and market conditions;
- actual or anticipated fluctuations in our operating results;
- changes in or our failure to meet analysts' or investors' estimates or expectations;
- public announcements concerning us, our competitors or our industry;
- acquisitions, divestitures, strategic partnerships, joint ventures, or capital commitments by us or our competitors;
- adverse developments in patent or other proprietary rights; and
- announcements of technological innovations by our competitors.

If our revenues or mix of revenues are below anticipated levels or if our operating results are below analyst or investor expectations, the market price of our common stock could be adversely affected

A significant percentage of our expenses, particularly personnel and facilities costs, are relatively fixed and based in part on anticipated revenue levels which can be difficult to predict. A decline in revenues without a corresponding and timely slowdown in expense growth could adversely affect our business. Significant revenue shortfalls in any quarter may cause significant declines in operating results since we may be unable to reduce spending in a timely manner.

Quarterly or annual operating results that are below the expectations of public market analysts could adversely affect the market price of our common stock. Factors that could cause fluctuations in our operating results include:

- a change in customer demand for our products, which is highly dependent on our ability to continue to offer innovative technology solutions in very competitive markets;
- the timing of customer orders;
- for our cloud solutions, the time it takes us to deliver to the customer a fully functional live production environment, since revenue recognition generally does not commence prior to that achievement;
- the timing of product implementations, which are highly dependent on customers' resources and discretion;
- overall economic conditions, which may affect our customers' and potential customers' budgets for information technology expenditures;
- foreign exchange rate volatility, which can have a significant effect on our total revenues and costs when our foreign operations are translated to U.S. dollars;

- the incurrence of costs relating to the integration of software products and operations in connection with acquisitions of technologies or businesses; and
- the timing and market acceptance of new products or product enhancements by either us or our competitors.

Certain anti-takeover provisions contained in our charter and under Delaware law could hinder a takeover attempt

We are subject to the provisions of Section 203 of the General Corporation Law of the State of Delaware prohibiting, under some circumstances, publicly-held Delaware corporations from engaging in business combinations with some stockholders for a specified period of time without the approval of the holders of substantially all of our outstanding voting stock. Such provisions could delay or impede the removal of incumbent directors and could make more difficult a merger, tender offer or proxy contest involving us, even if such events could be beneficial, in the short term, to the interests of our stockholders. In addition, such provisions could limit the price that some investors might be willing to pay in the future for shares of our common stock. Our certificate of incorporation and bylaws contain provisions relating to the limitation of liability and indemnification of our directors and officers, dividing our board of directors into three classes of directors serving three-year terms and providing that our stockholders can take action only at a duly called annual or special meeting of stockholders.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

The following table sets forth the location, the reportable segment(s) and approximate square footage of each of our material properties used by us during fiscal year 2019.

Location	Reportable Segment(s)	Approximate Square Feet
North America:		
Portsmouth, New Hampshire (Corporate Headquarters)	All segments	85,000
Portland, Maine	Cloud Solutions	27,000
Providence, Rhode Island	Banking Solutions	11,000
Wilton, Connecticut	Cloud Solutions	13,000
Europe:		
Reading, England (EMEA Headquarters)	All segments	27,000
Geneva, Switzerland	Cloud Solutions	16,000

Item 3. Legal Proceedings.

We are, from time to time, a party to legal proceedings and claims that arise in the ordinary course of our business. We do not believe that there are claims or proceedings pending against us for which the ultimate resolution would have a material effect on, or require disclosure in, our financial statements.

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 is traded on The Nasdaq Global Select Market under the symbol EPAY.

As of August 16, 2019, there were approximately 544 holders of record of our common stock. Because many of the shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of individual stockholders represented by these holders of record.

The closing price for our common stock on August 16, 2019 was $42.58. For purposes of calculating the aggregate market value of the shares of our common stock held by non-affiliates, as shown on the cover page of this report, it has been assumed that all the outstanding shares were held by non-affiliates except for the shares beneficially held by our directors and executive officers. However, there may be other persons who may be deemed to be affiliates of ours.

We have never paid dividends on our common stock. We do not anticipate paying any cash dividends on our common stock for the forseeable future.

On July 8, 2018, the repurchase program of up to $60 million of our common stock that was authorized by our board of directors on August 5, 2016 expired. No shares were repurchased under this program during fiscal 2019.

On August 5, 2019, we announced that our board of directors had authorized a repurchase program of up to $50 million of our common stock, including a commitment to repurchase at least $10 million of our common stock by September 30, 2019. This program is expected to expire on August 5, 2021.

Recent Sales of Unregistered Securities

On June 3, 2019, we issued 40,000 shares of our common stock, all of which were subject to future vesting conditions tied to continued employment, to a certain former stockholder of BankSight Software Systems, Inc. (BankSight) in connection with our purchase of all of the outstanding equity of BankSight. These shares were issued in reliance upon the exemption from the registration requirements of the Securities Act provided by Section 4(a)(2) of the Securities Act. No underwriters were involved in any such issuances.

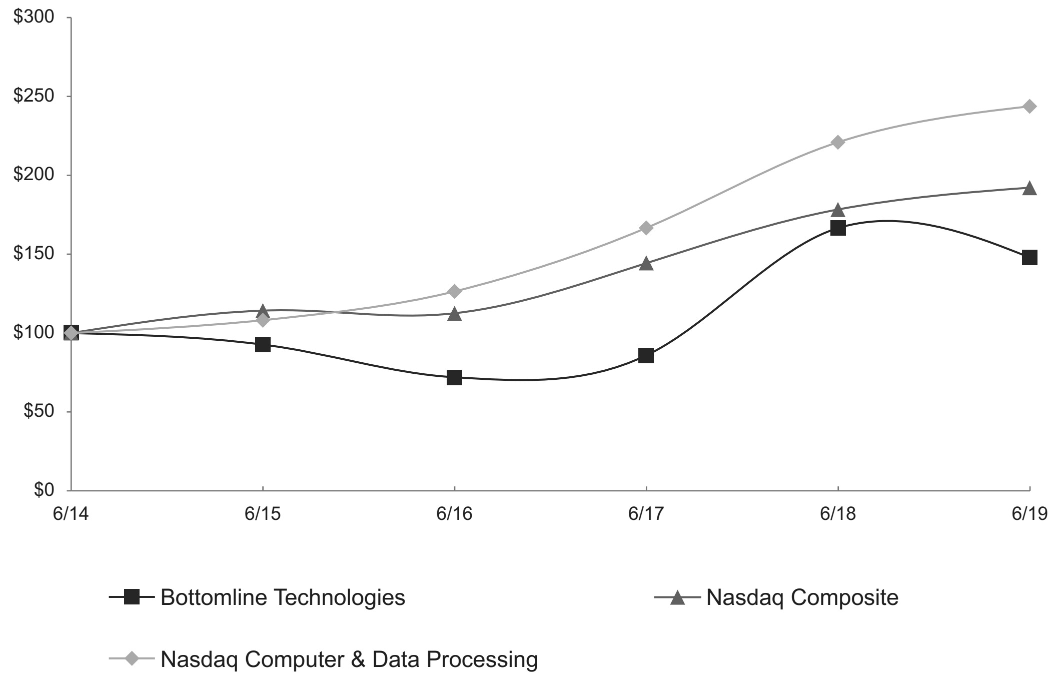
Stock Performance Graph

The stock performance graph below compares the percentage change in cumulative stockholder return on our common stock for the period from June 30, 2014 through June 30, 2019, with the cumulative total return on The Nasdaq Composite Index and the Nasdaq Computer & Data Processing Index.

This graph assumes the investment of $100.00 in our common stock (at the closing price of our common stock on June 28, 2014), the Nasdaq Composite Index and the Nasdaq Computer & Data Processing Index on June 28, 2014, and assumes dividends, if any, are reinvested.

The stock price performance shown on the following graph is not necessarily indicative of future price performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Bottomline Technologies (de), Inc., the Nasdaq Composite Index and the Nasdaq Computer & Data Processing Index



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* $100 invested on 6/28/14 in stock or index, including reinvestment of dividends.

Fiscal year ending June 30.

	6/14	6/15	6/16	6/17	6/18	6/19
Bottomline Technologies (de), Inc.	**$ 100.00**	**$ 92.95**	**$ 71.96**	**$ 85.86**	**$ 166.54**	**$ 147.86**
Nasdaq Composite	**100.00**	**114.44**	**112.51**	**144.35**	**178.42**	**192.30**
Nasdaq Computer & Data Processing	**100.00**	**108.37**	**126.57**	**166.63**	**221.04**	**243.84**

The information included under the heading Stock Performance Graph in Item 5 of this Annual Report on Form 10-K is furnished and not filed and shall not be deemed to be soliciting material or subject to Regulation 14A, shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the Exchange Act), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended (the Securities Act).

Item 6. Selected Financial Data.

You should read the following consolidated financial data in conjunction with the Financial Statements, including the related notes, and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations. The results shown herein are not necessarily indicative of the results to be expected for any future periods.

SELECTED CONSOLIDATED FINANCIAL DATA

	Fiscal Year Ended June 30,				
	2019	2018	2017	2016	2015
	(in thousands, expect per share data)				
Revenues:					
Subscriptions and transactions	$ 295,633	$ 262,363	$ 222,997	$ 195,187	$ 171,361
Software licenses	16,389	10,277	11,685	20,826	21,907
Service and maintenance	105,895	114,926	109,633	120,292	130,183
Other	4,045	6,530	5,097	6,969	7,438
Total revenues	421,962	394,096	349,412	343,274	330,889
Cost of revenues:					
Subscriptions and transactions	127,467	117,076	103,789	87,792	79,421
Software licenses	923	815	818	1,030	1,583
Service and maintenance	51,168	52,519	53,570	53,361	53,238
Other	3,161	3,032	3,737	5,059	5,367
Total cost of revenues	182,719	173,442	161,914	147,242	139,609
Gross profit	239,243	220,654	187,498	196,032	191,280
Operating expenses:					
Sales and marketing	95,265	86,095	77,523	84,161	80,137
Product development and engineering	67,364	57,500	53,055	47,447	47,306
General and administrative	52,199	49,869	46,535	39,339	34,512
Amortization of acquisition-related intangible assets	21,336	22,076	24,246	28,978	30,383
Goodwill impairment charge	—	—	7,529	—	—
Total operating expenses	236,164	215,540	208,888	199,925	192,338
Income (loss) from operations	3,079	5,114	(21,390)	(3,893)	(1,058)
Other income (expense), net	3,815	(3,989)	(16,884)	(14,970)	(15,258)
Income (loss) before income taxes	6,894	1,125	(38,274)	(18,863)	(16,316)
Income tax benefit (provision)	2,538	8,203	5,137	(785)	(18,364)
Net income (loss)	$ 9,432	$ 9,328	$ (33,137)	$ (19,648)	$ (34,680)
Basic and diluted net income (loss) per share	$ 0.23	$ 0.24	$ (0.88)	$ (0.52)	$ (0.92)
Shares used in computing net income (loss) per share:					
Basic	40,612	38,227	37,842	37,957	37,806
Diluted	41,691	39,326	37,842	37,957	37,806

On July 1, 2018 we adopted an accounting standard update that changed the classification of certain pension related items. This accounting standard was adopted retrospectively. Accordingly, pension related benefits were reclassified from cost of sales and operating expenses to other income (expense), net for each of the years ended June 30, 2018, 2017, 2016 and 2015.

	At June 30,				
	2019	2018	2017	2016	2015
			(in thousands)		
Balance Sheet Data:					
Cash and cash equivalents	$ 92,164	$ 121,860	$ 124,569	$ 97,174	$ 121,163
Marketable securities	7,541	10,012	1,973	35,209	23,225
Working capital (1)	87,435	105,357	(88,394)	104,479	122,799
Total assets	669,229	635,968	617,439	651,210	685,623
Long-term debt (2)	110,000	150,000	—	169,857	156,899
Total stockholders' equity	379,377	310,932	261,956	294,787	348,538

(1) At June 30, 2017, the negative working capital position arose due to the inclusion of our convertible senior notes, which matured in December 2017, as a current rather than long-term liability. We financed the repayment of the principal balance of our convertible senior notes through a combination of cash on hand and with borrowings under our revolving credit facility.

(2) Our long-term debt as of June 30, 2016 and 2015 consisted of our convertible senior notes. The convertible senior notes are shown at their carrying value which represents the principal balance of $189.8 million less any unamortized discount and debt issuance costs. Our long-term debt as of June 30, 2019 and 2018 consisted of our borrowings under our credit facility.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the financial statements and notes thereto appearing elsewhere in this Annual Report on Form 10-K. This Annual Report on Form 10-K contains forward-looking statements that involve risks and uncertainties. The statements contained in this Annual Report that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). Without limiting the foregoing, the words may, will, should, could, expects, plans, intends, anticipates, believes, estimates, predicts, potential and similar expressions are intended to identify forward-looking statements. All forward-looking statements included in this Annual Report on Form 10-K are based on information available to us up to and including the date of this report, and we assume no obligation to update any such forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth in Management's Discussion and Analysis of Financial Condition and Results of Operations and Risk Factors and elsewhere in this Annual Report on Form 10-K. You should carefully review those factors and also carefully review the risks outlined in other documents that we file from time to time with the Securities and Exchange Commission (SEC).

In the management discussion that follows, we have highlighted those changes and operating events that were the primary factors affecting period to period fluctuations. The remainder of the change in period to period fluctuations from that which is specifically discussed arises from various individually insignificant items.

Overview

We help make complex business payments simple, smart and secure. Corporations and banks rely on us for domestic and international payments, efficient cash management, automated workflows for payment processing and bill review, and fraud detection, behavioral analytics and regulatory compliance solutions.

We operate settlement networks that facilitate electronic payments and transaction settlement between businesses, their vendors and banks. We offer solutions that banks use to provide payment, cash management and treasury capabilities to their business customers, as well as solutions that financial institutions use to facilitate customer acquisition and to grow profitable customer relationships through intelligent engagement. Our legal spend management solutions help manage and determine the right amount to pay for legal services and claims vendor expenditures for insurance companies and other large consumers of outside legal services as well as related tools and analytics for the law firms themselves. Corporate customers rely on our solutions to automate payment and accounts payable processes and to streamline and manage the production and retention of electronic documents. We also offer cyber fraud and risk management solutions that are designed to non-invasively monitor and analyze user behavior and payment transactions to flag behavioral and data anomalies and other suspicious activity.

Our solutions are designed to complement, leverage and extend our customers' existing information systems, accounting applications and banking relationships so that they can be deployed quickly and efficiently. To help our customers realize the maximum value from our products and meet their specific business requirements, we also provide professional services for training, consulting and product enhancement.

Financial Highlights

The discussion that follows compares our operating results for the fiscal year ended June 30, 2019 to the fiscal year ended June 30, 2018. We adopted a new revenue recognition standard on July 1, 2018 and, in accordance with the method of adoption, did not recast prior period information. The new revenue standard has generally resulted in a modest reduction in our service and maintenance revenue, while increasing software license and, to a lesser extent, subscriptions and transactions revenue from our banking solutions, for the fiscal year ended June 30, 2019 as compared to the respective prior period. The new revenue standard requires the capitalization of certain costs incurred to fulfill or obtain contracts, which prior to adoption were expensed as incurred. Accordingly, this has resulted in a modest reduction to cost of revenues and operating expenses for the fiscal year ended June 30, 2019 as compared to the respective prior periods. Please refer to *Note 4 Revenue Recognition* to our consolidated financial statements included in this Annual Report on Form 10-K for a detailed reconciliation of the impact of the adoption of this standard on our operating results.

For the fiscal year ended June 30, 2019, our revenue increased to $422.0 million from $394.1 million in the prior fiscal year. Our revenue for the fiscal year ended June 30, 2019 was unfavorably impacted by $5.3 million due to the impact of foreign currency exchange rates primarily related to the Swiss Franc and British Pound Sterling, both of which depreciated against the U.S. Dollar as compared to the prior fiscal year. The fiscal 2019 revenue increase was attributable to revenue increases in our Cloud Solutions segment of $20.3 million, our Payments and Transactional Documents segment of $5.5 million and our Banking Solutions segment of $2.1 million. Increased revenue from our legal spend management and Paymode-X settlement network solution accounted for the revenue increase in our Cloud Solutions segment. The revenue increase in our Payments and Transactional Documents segment was related to higher European subscriptions and transactions revenue in our payment products. The Banking Solutions segment's revenue increase was primarily due to new customer engagements and platform go-lives, as customers continued to deploy our solutions.

Net income was $9.4 million in the fiscal year ended June 30, 2019 compared to net income of $9.3 million in the prior fiscal year. Our net income for the fiscal year ended June 30, 2019 was favorably impacted by gross profit expansion of $18.6 million and a reduction in other expense, net of $7.8 million, primarily due to a decrease in the amortization of debt discount costs. In addition, in fiscal 2019 we recorded as a component of other income, a non-recurring gain of $7.3 million upon the liquidation of an investment we held. In fiscal 2018, we recorded non-recurring other income of $6.1 million attributable to the sale of a cost-method investment. These improvements were partially offset by an increase in operating expenses of $20.6 million as we continued to invest in development and sales and marketing and a decrease in our income tax benefit of $5.7 million. The increase in gross margins was driven by increases in revenue in our Cloud Solutions, Payments and Transactional Documents and Banking Solutions segments. The increase in operating expenses was driven by increased product development and engineering costs of $9.9 million as we continued to invest in new product innovation, increased sales and marketing costs of $9.2 million and increased general and administrative costs of $2.3 million.

In the fiscal year ended June 30, 2019, we derived approximately 38% of our revenue from customers located outside of North America, principally in the United Kingdom, continental Europe and the Asia-Pacific region.

We expect future revenue growth to be driven primarily by our banking and cloud solutions.

Over the past several years we have made strategic investments in innovative new technology offerings that we believe will enhance our competitive position, help us win new business, drive subscription revenue growth and expand our operating margins. We expect to continue to make investments in our suite of products so that we can continue to offer innovative, feature-rich technology solutions to our customers.

Revenue Sources

Our revenues are derived from multiple sources and are reported under the following classifications:

Subscriptions and Transactions: We generate subscriptions and transactions revenue through the provision of hosted and SaaS-based solutions which can include contractually fixed revenue amounts as well as usage-based fees. Our SaaS arrangements consist of an obligation for us to provide continuous access to a technology solution that we host, which we account for as a stand-ready performance obligation. These contracts may also be subject to variable pricing or overage fees based on customer processing, usage or volume. We recognize revenue for fixed subscription fees ratably over the non-cancelable term of the contract, commencing on the date the customer has access to the solution. In circumstances where we meet certain requirements to allocate variable consideration to a distinct service within a series of related services, we allocate variable consideration to each distinct period of service within the series. If we do not meet those requirements, we include an estimate of variable consideration in the transaction price and recognize it ratably over the non-cancelable term of the contract.

For certain of our hosted or SaaS solutions, customers are charged a fee for implementation services. In determining whether the implementation services are distinct from the hosting services we consider various factors, including the level of customization, complexity of the integration, the interdependency and interrelationship between the implementation services and the hosting services and the ability (or inability) of the customer's personnel or other service providers to perform the services. We have concluded that the implementation services in our hosting arrangements with multiple performance obligations are not distinct and therefore we recognize fees for implementation services ratably over the non-cancelable term of the hosting contract.

We license certain software on a subscription basis under contractual arrangements where customers pay a specified fee, inclusive of support and maintenance, for a time-based license right to use our software. These fees recur periodically unless the customer opts to cancel their subscription arrangement with us. These contracts typically contain two distinct performance obligations: the software license and support and maintenance. The portion of the transaction price allocated to the license right is recognized at the point in time in which we have provided the customer access to the intellectual property and the license term has commenced. The portion of the transaction price allocated to support and maintenance is recognized ratably over the non-cancelable contract term.

Software Licenses: Software licenses revenue reflects fees we charge to license software on a perpetual basis. For software licenses that do not include significant customization we recognize revenue at the point in time where the customer has obtained access to the intellectual property and the license period has commenced.

Certain of our software arrangements require significant customization and modification and involve extended implementation periods. In these arrangements the professional services and software license are highly interdependent and we treat the software license and professional services as a combined performance obligation. We recognize revenue for the combined performance obligation over time and measure progress to completion based on labor hours incurred as a percentage of total expected labor hours. We believe the use of labor hours as an input measure provides a faithful depiction of the transfer of goods and services under these contracts.

Support and Maintenance: Our software licenses are generally sold with post-contract support which is comprised of technical support and unspecified software upgrades. Unspecified upgrades refer to software upgrades which we make available at our discretion and from time-to-time, on a "when and as available" basis. We account for post-contract support as a stand-ready performance obligation and recognize revenue ratably over the non-cancelable contract term which is typically one year.

Professional Services: Our professional services revenue is normally comprised of implementation, consulting and training services. Except for professional service performance obligations that form part of an overall, highly customized arrangement, our professional services typically represent distinct performance obligations and revenue is recognized as the services are performed.

Other: Other revenue which remains a minor component of total revenue is derived from the sale of equipment and supplies and is recognized at the point in time control transfers to the customer.

Critical Accounting Policies and Significant Judgments and Estimates

We believe that several accounting policies are important to understanding our historical and future performance. We refer to these policies as critical because these specific areas generally require us to make judgments and estimates about matters that are uncertain at the time we make the estimate, and different estimates - which also would have been reasonable - could have been used. These critical accounting policies and estimates relate to revenue recognition, the valuation of goodwill and intangible assets, the valuation of acquired performance obligations, income taxes and capitalized software costs. These critical policies and our procedures related to these policies are discussed below. In addition, refer to *Note 2 Significant Accounting Policies* to our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for further details regarding this matter.

Revenue Recognition

Effective July 1, 2018 we adopted a new accounting standard related to revenue recognition. The new revenue standard applies to all customer contracts and requires that revenue be recognized upon the transfer of control of the product or service to the customer at an amount we expect to be entitled to in exchange for those products and services. We recognize revenue according to the following five step model:

- Identifying the contract (or contracts) with a customer;
- Identifying the performance obligations in the contract;
- Determining the transaction price;
- Allocating the transaction price to the contractual performance obligations; and
- Recognizing revenue as performance obligations are satisfied.

Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. We account for a good or service as a distinct performance obligation when it is separately identifiable from other items in the contract and a customer can benefit from the good or service on its own. In determining whether a customer can benefit from a good or service on its own, we consider the complexity of any required integration or customization, the interdependency and interrelationship of the particular good or service to other items in the contract and the ability (or inability) of the customer's personnel or other third party providers to successfully fulfill like goods or services. If a promised good or service does not meet the criteria to be accounted for as a separate performance obligation, it is combined with other items in the contract and treated as a combined performance obligation. Revenue is then recognized in the amount of the transaction price allocated to the combined performance obligation as the combined performance obligation is transferred to the customer.

The transaction price represents the amount of consideration that we expect to be entitled to receive under the contract and may involve significant judgment and estimation regarding the determination of variable consideration such as refunds, penalties, usage-based fees or similar items. Unless we meet certain exceptions, we are required to estimate the amount of variable consideration we expect to receive under the contract. In formulating this estimate, we consider the specific customer's operating history with us, current usage data and the length of time over which the fees are expected to be incurred. We include estimated variable consideration in the transaction price if we conclude that a significant future reversal of revenue under the contract will not occur.

The transaction price is allocated to the individual performance obligations in a contract. If a contract only has one performance obligation (for example, a professional services only engagement) the entire transaction price is allocated to that performance obligation. For contracts with multiple performance obligations, the transaction price is allocated to each performance obligation based on the proportionate relationship of that performance obligation's standalone selling price to the total transaction price. Determining the standalone selling price (SSP) involves significant judgment and estimation. We determine SSP by considering our overall pricing objectives and market conditions and we typically define SSP as an overall pricing range for individual products and services due to the stratification of those products and services by customer size and geography. In most cases we use an adjusted market assessment approach to estimate SSP and consider the following:

- The price we charge when we sell that item separately;
- Internal price lists and internal pricing guidelines;
- Cost of delivering the item and overall gross margin expectations; and
- Information about the customer or class of customer.

Revenue is recognized for each performance obligation as we satisfy the obligation. Performance obligations are satisfied either over time or at a point in time. Our perpetual license and term license obligations that do not include significant customization are normally satisfied at a point in time. Our professional services, support and maintenance, stand-ready performance obligations with respect to our hosted or SaaS solutions and software licenses dependent on significant customization by us are normally satisfied over time.

Deferred Costs

Under the revenue standard, certain costs that we historically expensed as incurred are now required to be capitalized. Costs capitalized can relate to either costs to fulfill a contract or costs to obtain a contract.

We capitalize costs incurred to fulfill a contract when the costs relate directly to a specifically identifiable customer contract, when the costs generate or enhance the resources that we will use to satisfy performance obligations in the future and when we estimate that we will recover the costs through future revenues under the contract.

Costs incurred to obtain a contract are those incremental costs that would not have been incurred if the contract had not been obtained, such as sales commissions. We capitalize sales commissions when we estimate that the capitalized amounts will be recovered through future revenues under the contract and the period of benefit is longer than twelve months.

Any costs that we capitalize are amortized to expense over the period in which we expect to transfer the specific goods or services to the customer. Estimating the expected period of benefit involves judgment. We estimate the future period of benefit after considering a number of factors, including the current contract term, estimated customer renewal terms and the estimated life of the technology solution underlying the contract.

Goodwill and Acquired Intangible Assets

Goodwill and acquired intangible assets are initially recorded at fair value and tested periodically for impairment. We performed our annual impairment test of the carrying value of our goodwill for fiscal year 2019 during our fourth quarter, which is consistent with the historic timing of our annual goodwill impairment review. Our analysis of goodwill impairment was performed at the reporting unit level, which requires an estimate of the fair value of each reporting unit.

Based on the results of our annual impairment review during the fourth quarter of fiscal year 2019, we concluded there was no goodwill impairment in any of our reporting units. However, there can be no assurance that there will not be impairment charges in subsequent periods as a result of our future impairment reviews. To the extent that future impairment charges occur, it would have a material impact on our financial results. At June 30, 2019, the carrying value of goodwill for all of our reporting units was $206.1 million.

We also perform periodic reviews of the carrying value and amortization periods of our other acquired intangible assets. These acquired intangible assets consist primarily of acquired customer related assets and acquired core technology. In evaluating potential impairment of these assets we specifically consider whether any indicators of impairment are present, including:

- whether there has been a significant adverse change in the business climate that affects the value of an asset;
- whether there has been a significant change in the extent or manner in which an asset is used; and
- whether there is an expectation that the asset will be sold or disposed of before the end of its originally estimated useful life.

If indicators of impairment are present, an estimate of the undiscounted cash flows that the specific asset is expected to generate must be made to ensure that the carrying value of the asset can be recovered. At June 30, 2019, the carrying value of our acquired intangible assets, excluding goodwill, capitalized software and purchased software, was $121.6 million. As a result of our fiscal year 2019 impairment review, we concluded that none of these assets were impaired.

Valuation of Acquired Intangible Assets and Acquired Performance Obligations

In connection with our acquisitions, we have recorded acquired intangible assets relating principally to customer related assets, acquired technology and acquired contractual rights that include favorable economic terms as compared to overall market rates at the date of acquisition. The valuation process used to calculate the values assigned to these acquired intangible assets is complex and involves significant estimation relative to our financial projections. One of the principal components of the valuation process is the determination of discounted future cash flows, and there are a number of variables that we consider for purposes of projecting these future cash flows. There is inherent uncertainty involved with this estimation process and, while our estimates are consistent with our internal planning assumptions, the ultimate accuracy of these estimates is only verifiable over time. Further, the projections required for the valuation process generally utilize at least a ten-year forecast, which exceeds our normal internal planning and forecasting timeline. The particularly sensitive components of these estimates include, but are not limited to:

- the selection of an appropriate discount rate;
- our projected overall revenue growth and mix of revenue;
- our gross margin estimates (which are highly dependent on our mix of revenue);
- our technology and product life cycles;
- the attrition rate of our customers, particularly those who contribute to our recurring revenue streams, such as software maintenance and our cloud solutions;
- the determination of third party market rates for leases or other contractual rights we acquire, for purposes of assessing whether we have acquired a favorable, unfavorable or at-market contract;
- our planned level of operating expenses; and
- our effective tax rate by operating geography.

Additionally, we are required to estimate the acquisition date fair value of acquired performance obligations that we assume as part of any acquisition. The acquisition date fair value of performance obligations we assume is typically estimated based on the costs we expect to incur in fulfilling the acquired obligations, plus a normal profit margin. Cost estimates exclude amounts relating to any selling effort, since those costs would have been incurred by the predecessor company. In the case of acquired software maintenance contracts, cost estimates also exclude any ongoing research and development expenses associated with product upgrades since these amounts typically do not represent a performance obligation that we assume at the time of acquisition.

Income Taxes

We are subject to the income tax laws of the United States (including its states and municipalities) as well as the tax laws of the foreign jurisdictions in which we operate. Our annual tax rate is determined based on our income, statutory tax rates and the tax impact of items treated differently for tax purposes than for financial statement purposes. The income tax expense we record in any interim period is based on our estimated tax rate for the full fiscal year for those tax jurisdictions in which we can reliably estimate that rate. The calculation of our estimated effective tax rate requires an estimate of pre-tax income by tax jurisdiction as well as total tax expense for the fiscal year. Accordingly, our annual estimated effective tax rate is subject to adjustment if there are changes to our initial estimate of total tax expense or pretax income, including the mix of income by jurisdiction. We update these estimates on a quarterly basis, so that our interim financial statements reflect our most current projections for the full fiscal year.

Our income tax expense consists of two components: current and deferred. Current tax expense represents our estimate of taxes to be paid for the current period, including income tax expense arising from uncertain tax positions. Deferred tax expense results from changes in deferred tax assets and liabilities between periods. Deferred tax assets and liabilities arise due to differences between when certain transactions are reflected in our financial statements and when those same items are included in a tax return. Deferred tax assets generally reflect the impact of a tax deduction, tax credit or operating loss carryforward that we have available for use in future year tax returns. Deferred tax liabilities generally reflect the impact of a deduction or expenditure that we have already taken in a tax return but have not yet reflected in our financial statements.

We record a deferred tax asset if we believe that it is more likely than not that we will realize a future tax benefit. Ultimate realization of any deferred tax asset is dependent on our ability to generate sufficient future taxable income in the appropriate tax jurisdiction before the expiration of carryforward periods, if any. Our assessment of deferred tax asset recoverability considers many different factors including historical and projected operating results, the reversal of existing deferred tax liabilities that provide a source of future taxable income, the impact of current tax planning strategies and the availability of future tax planning strategies. We record a valuation allowance against any deferred tax asset for which we are unable to conclude that recoverability is more likely than not. This is inherently judgmental, since we are required to assess many different factors and evaluate as much objective evidence as we can in reaching an overall conclusion. The particularly sensitive component of our evaluation is our projection of future operating results since this relies heavily on our estimates of future revenue and expense levels by tax jurisdiction.

We establish reserves to remove some or all of the tax benefit we would have otherwise recorded if a tax position is uncertain. In evaluating whether a tax position is uncertain, we base our assessment on existing tax legislation, case law and legal statute. We also presume that the tax position will be examined by the relevant taxing authority that has full knowledge of all relevant information. We recognize tax benefits related to uncertain tax positions at the largest amount deemed more likely than not will be realized upon tax examination. We review our tax positions quarterly and adjust the balances as necessary.

Capitalized Software Costs

We capitalize certain software development costs under accounting frameworks that differ based on the nature of the software.

Capitalization of software development costs for software that is to be sold, leased or otherwise marketed begins upon the establishment of technological feasibility. The establishment of technological feasibility and the ongoing assessment of recoverability of capitalized software development costs requires considerable judgment by us with respect to certain factors, including, but not limited to, determining which projects and development activities within those projects qualify for capitalization, anticipated future gross revenues, estimated economic life, and changes in software and hardware technologies. Amortization of capitalized costs commence on the date of general release of the software using the greater of the straight-line method over the estimated useful life, or the ratio of revenue in the period to total expected revenues over the product’s expected useful life. For the fiscal years ended June 30, 2019, 2018 and 2017, we capitalized $3.7 million, $3.2 million and $3.4 million, respectively, and recorded amortization expense of $3.8 million, $2.8 million and $2.2 million, respectively, of software development costs, excluding software developed for internal use. At June 30, 2019 and 2018, the net carrying value of capitalized software costs, excluding software developed for internal use, was $13.2 million and $13.3 million, respectively.

We capitalize certain development costs associated with internal use software incurred during the application development stage. We expense costs associated with preliminary project phase activities, training, maintenance and any post-implementation costs as incurred. For the fiscal years ended June 30, 2019, 2018 and 2017, we capitalized $10.4 million, $6.3 million and $6.6 million, respectively, of internal use software development costs associated with our SaaS-based technology platforms. Capitalized internal use software costs are normally amortized over estimated useful lives ranging from 2 to 7 years once the related project has been completed and deployed for use. For the fiscal years ended June 30, 2019, 2018 and 2017, we recorded amortization expense of $6.1 million, $5.2 million and $3.8 million, respectively, of capitalized internal use software costs associated with our SaaS-based technology platforms. At June 30, 2019 and 2018, the net carrying value of capitalized internal use software associated with our SaaS-based technology platforms was $21.1 million and $16.8 million, respectively.

Recent Accounting Pronouncements

For information with respect to recent accounting pronouncements and the impact of these pronouncements on our consolidated financial statements, see *Note 3 Recent Accounting Pronouncements* to our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

Results of Operations

Fiscal Year Ended June 30, 2019 Compared to Fiscal Year Ended June 30, 2018

Segment Information

Operating segments are components of an enterprise for which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. Our chief operating decision maker is our chief executive officer.

Our operating segments are organized principally by the type of product or service offered and by geography. Similar operating segments have been aggregated into four reportable segments: Cloud Solutions, Banking Solutions, Payments and Transactional Documents and Other.

The following tables represent our segment revenues and our segment measure of profit (loss):

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2019	2018	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Segment revenue:				
Cloud Solutions	$ 202,574	$ 182,290	$ 20,284	11.1 %
Banking Solutions	93,956	91,851	2,105	2.3 %
Payments and Transactional Documents	106,854	101,372	5,482	5.4 %
Other	18,578	18,583	(5)	— %
Total segment revenue	$ 421,962	$ 394,096	$ 27,866	7.1 %
Segment measure of profit (loss):				
Cloud Solutions	$ 42,927	$ 37,862	$ 5,065	13.4 %
Banking Solutions	8,227	9,703	(1,476)	(15.2)%
Payments and Transactional Documents	31,393	28,373	3,020	10.6 %
Other	(5,301)	(2,199)	(3,102)	(141.1)%
Total measure of segment profit	$ 77,246	$ 73,739	$ 3,507	4.8 %

A reconciliation of the measure of total segment profit to our GAAP income before income taxes is as follows:

	Fiscal Year Ended June 30, 2019	Fiscal Year Ended June 30, 2018
	(in thousands)	
Total measure of segment profit	$ 77,246	$ 73,739
Less:		
Amortization of acquisition-related intangible assets	(21,336)	(22,076)
Stock-based compensation plan expense	(41,695)	(34,200)
Acquisition and integration-related expenses	(4,648)	(2,564)
Restructuring expenses	(1,881)	(1,495)
Legal settlement	—	(1,269)
Minimum pension liability adjustments	(264)	(24)
Other non-core (expense) income	(550)	150
Global ERP system implementation and other costs	(3,395)	(6,430)
Other expense, net [1]	3,417	(4,706)
Income before income taxes	$ 6,894	$ 1,125

[1] On July 1, 2018, we adopted an accounting standard update that changes the classification of certain pension related items. For purposes of this reconciliation of segment profit, we have presented pension related adjustments discretely, not as a component of other expense, net.

Cloud Solutions

Revenues from our Cloud Solutions segment increased $20.3 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due to increased revenue of $11.3 million from our legal spend management solutions and $8.9 million from our settlement network solutions. Segment profit increased $5.1 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due primarily to the revenue increase described above, partially offset by increased cost of revenues of $6.8 million and increased operating expenses of $8.4 million primarily related to increased sales and marketing and product development and engineering costs. We expect revenue and profit for the Cloud Solutions segment to increase in fiscal year 2020 as a result of increased revenue from our legal spend management and our Paymode-X and financial messaging settlement network solutions.

Banking Solutions

Revenues from our Banking Solutions segment increased $2.1 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due to increased subscriptions and transactions revenue of $4.5 million and increased software license revenue of $4.3 million as we continued to expand the base of customers on our SaaS platforms and as a result of our continued deployment of our newer banking solutions, partially offset by decreased professional services revenue of $5.0 million. Our Banking Solutions segment revenue for the fiscal year ended June 30, 2018 included other revenues of $2.6 million, which represented a one-time buyout of a revenue share arrangement, impacting the year over year growth rate in the fiscal year ended June 30, 2019. Segment profit decreased $1.5 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year due primarily to increased product development and engineering costs. We expect revenue to continue to increase and profit to remain consistent for the Banking Solutions segment in fiscal year 2020 as compared to fiscal year ended 2019.

Payments and Transactional Documents

Revenues from our Payments and Transactional Documents segment increased $5.5 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due primarily to increased subscriptions and transactions revenue of $11.5 million from our European payments and transactional documents solutions, due in part to the impact of recent acquisitions, partially offset by decreased service and maintenance revenue of $5.1 million and decreased software license revenue of $0.8 million. The decrease in service and maintenance revenue was driven by the continued migration of customers to our hosted payment products rather than deployed, on-premise solutions. Segment profit increased $3.0 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due primarily to the revenue increase described above, partially offset by increased operating expenses of $2.2 million primarily related to increased product development and engineering costs. We expect revenue to increase and profit to remain consistent for the Payments and Transactional Documents segment in fiscal year 2020.

Other

Revenues from our Other segment remained consistent for the fiscal year ended June 30, 2019 as compared to the prior fiscal year. Segment profit decreased $3.1 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due primarily to increased service and maintenance cost of revenue and increased sales and marketing and product development costs. We expect Other segment revenue and profit to remain consistent in fiscal year 2020.

Revenues by Category

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2019	2018	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Revenues:				
Subscriptions and transactions	$ 295,633	$ 262,363	$ 33,270	12.7 %
Software licenses	16,389	10,277	6,112	59.5 %
Service and maintenance	105,895	114,926	(9,031)	(7.9)%
Other	4,045	6,530	(2,485)	(38.1)%
Total revenues	$ 421,962	$ 394,096	$ 27,866	7.1 %

Subscriptions and Transactions

Revenues from subscriptions and transactions increased $33.3 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year. The overall revenue increase was due to revenue increases from our Cloud Solutions segment and Payments and Transactional Documents segment of $18.7 million and $11.7 million, respectively, due to the impact of customers going live on our hosted platforms, the continued migration of customers to subscriptions and transactions based arrangements and, to a lesser degree, the impact of recent acquisitions. We expect subscriptions and transactions revenues to increase in fiscal year 2020 as compared to the prior fiscal year due to revenue increases in our legal spend management solutions, our Paymode-X and financial messaging settlement network solutions and from our banking solutions platforms.

Software Licenses

Revenues from software licenses increased $6.1 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, primarily as a result of increased revenue from our Banking Solutions segment and Other segment of $4.3 million and $1.4 million, respectively. The increase in revenue is due in part from our adoption of the new revenue standard on July 1, 2018 which resulted in revenue recognition sooner for certain arrangements for which revenue recognition was delayed under legacy GAAP, such as when vendor specific objective evidence of fair value could not be established. In addition, the change in methodology for allocation of the transaction price between performance obligations had the impact of increasing software revenue under the new standard. We expect software license revenues to decrease in fiscal year 2020, as we continue to emphasize our cloud based solutions rather than on-premise software deployments.

Service and Maintenance

Revenues from service and maintenance decreased $9.0 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year. The overall revenue decrease was due to decreases in revenue from our Payments and Transactional Documents segment of $5.1 million and Banking Solutions segment of $4.1 million, in each case reflecting the continued migration of customers to our subscription-based solutions. These decreases were partially offset by increased revenue from our Cloud Solutions segment of $0.4 million. We expect service and maintenance revenues will decrease in fiscal year 2020 as a result of decreased services revenue from our Payments and Transactional Documents and Banking Solutions segments and financial messaging solutions, primarily due to our continued emphasis on subscription and cloud based solutions.

Other

Our other revenues consist principally of equipment and supplies sales, which remained minor components of our overall revenue. We expect that other revenues will remain relatively consistent in fiscal year 2020.

Cost of Revenues

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2019	2018	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Cost of revenues:				
Subscriptions and transactions	$ 127,467	$ 117,076	$ 10,391	8.9 %
Software licenses	923	815	108	13.3 %
Service and maintenance	51,168	52,519	(1,351)	(2.6)%
Other	3,161	3,032	129	4.3 %
Total cost of revenues	$ 182,719	$ 173,442	$ 9,277	5.3 %
Gross profit	$ 239,243	$ 220,654	$ 18,589	8.4 %

Subscriptions and Transactions

Subscriptions and transactions costs include salaries and other related costs for our professional services teams as well as costs related to our hosting infrastructure such as depreciation and facilities related expenses. Subscriptions and transactions costs as a percentage of subscriptions and transactions revenues decreased slightly to 43% for the fiscal year ended June 30, 2019 as compared to 45% for the prior fiscal year, due primarily to the revenue increases in our legal spend management and settlement network solutions. We expect subscriptions and transactions costs as a percentage of subscriptions and transactions revenues will continue to decrease in fiscal year 2020 as a result of increased revenue contribution from our cloud-based banking, legal spend management and Paymode-X solutions and payments and transactional document solutions.

Software Licenses

Software license costs consist of expenses incurred by us to distribute our software products and related documentation and costs of licensing third party software that is incorporated into or sold with certain of our products. Software license costs decreased slightly to 6% of software license revenues for the fiscal year ended June 30, 2019 as compared to 8% for the prior fiscal year. We expect software license costs as a percentage of software license revenues will remain relatively consistent in fiscal year 2020.

Service and Maintenance

Service and maintenance costs include salaries and other related costs for our customer service, maintenance and help desk support staffs, as well as third party contractor expenses used to complement our professional services team. Service and maintenance costs increased slightly to 48% of service and maintenance revenues for the fiscal year ended June 30, 2019 as compared to 46% of service and maintenance revenues for the prior fiscal year, due primarily to increased service and maintenance costs as a percentage of service and maintenance revenue from our European payments and transactional documents solutions. We expect that service and maintenance costs as a percentage of service and maintenance revenues will remain relatively consistent in fiscal year 2020.

Other

Other costs include the costs associated with equipment and supplies that we resell, as well as freight, shipping and postage costs associated with the delivery of our products. These remain minor components of our business. We expect other costs as a percentage of other revenues will remain relatively consistent in fiscal year 2020.

Operating Expenses

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2019	2018	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Operating expenses:				
Sales and marketing	$ 95,265	$ 86,095	$ 9,170	10.7 %
Product development and engineering	67,364	57,500	9,864	17.2 %
General and administrative	52,199	49,869	2,330	4.7 %
Amortization of acquisition-related intangible assets	21,336	22,076	(740)	(3.4)%
Total operating expenses	$ 236,164	$ 215,540	$ 20,624	9.6 %

Sales and Marketing

Sales and marketing expenses consist primarily of salaries and other related costs for sales and marketing personnel, sales commissions, travel, public relations and marketing materials and trade show participation. Sales and marketing expenses increased by $9.2 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due primarily to an increase in employee related costs of $6.5 million incurred to support our continued revenue growth. We expect sales and marketing expenses as a percentage of total revenue will increase in fiscal year 2020.

Product Development and Engineering

Product development and engineering expenses consist primarily of personnel costs to support product development, which consists of enhancements and revisions to our products. Product development and engineering expenses increased by $9.9 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, principally as a result of an increase in headcount related costs as we continued to invest in the deployment of innovative, feature-rich products. We expect product development and engineering expenses as a percentage of total revenues will increase in fiscal year 2020.

General and Administrative

General and administrative expenses consist primarily of salaries and other related costs for operations and finance employees and legal and accounting services. General and administrative expenses increased by $2.3 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, due primarily to increased employee related costs of $3.7 million partially offset by decreased global enterprise resource planning

(ERP) implementation and other costs of $3.0 million. We expect general and administrative expenses as a percentage of total revenues will decrease slightly in fiscal year 2020.

Amortization of Acquisition-related Intangible Assets

We amortize our acquired intangible assets in proportion to the estimated rate at which the asset provides economic benefit to us. Accordingly, amortization expense rates are often higher in the earlier periods of an asset's estimated life. The decrease in amortization expense for the fiscal year ended June 30, 2019 as compared to the prior fiscal year occurred as a result of amortization rates decreasing over the underlying asset lives. We expect that total amortization expense for acquired intangible assets for fiscal year 2020 will be approximately $20.5 million.

Other Income (Expense), Net

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2019	2018	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Interest income	$ 670	$ 273	$ 397	145.4 %
Interest expense	(3,783)	(11,170)	7,387	66.1 %
Other income, net	6,928	6,908	20	(0.3)%
Other income (expense), net	$ 3,815	$ (3,989)	$ 7,804	195.6 %

Other Income (Expense), Net

Other income, net increased $7.8 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year, primarily due to decreases in the amortization of debt discount costs upon the maturity of our convertible senior notes in December 2017. In fiscal 2019 we recorded as a component of other income, a non-recurring gain of $7.3 million upon the liquidation of an investment we held. In fiscal 2018, we recorded non-recurring other income of $6.1 million attributable to the sale of a cost method investment.

Provision for Income Taxes

We recorded an income tax benefit of $2.5 million and $8.2 million for the fiscal years ended June 30, 2019 and 2018, respectively. The income tax benefit for the fiscal year ended June 30, 2019 was due to income tax benefits relating to our U.S. and Israeli operations, offset in part by income tax expense in our UK and Swiss operations. The income tax benefit in the U.S. was related to a reduction in our net deferred tax liabilities and a reduction to our valuation allowance arising from our acquisition of BankSight Software Systems, Inc. where certain deferred tax liabilities provide a source of future taxable income. We also recorded a discrete tax benefit of $0.8 million from the enactment of legislation that decreased tax rates in Switzerland. The income tax benefit for the fiscal year ended June 30, 2018 was primarily due to a discrete tax benefit of $8.0 million arising from the impact of the U.S. Tax Cuts and Jobs Act in the United States.

Fiscal Year Ended June 30, 2018 Compared to Fiscal Year Ended June 30, 2017

Segment Information

The following tables represent our segment revenues and our segment measure of profit (loss):

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2018	2017	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Segment revenue:				
Cloud Solutions	$ 182,290	$ 154,821	$ 27,469	17.7 %
Banking Solutions	91,851	79,227	12,624	15.9 %
Payments and Transactional Documents	101,372	98,150	3,222	3.3 %
Other	18,583	17,214	1,369	8.0 %
Total segment revenue	$ 394,096	$ 349,412	$ 44,684	12.8 %
Segment measure of profit (loss):				
Cloud Solutions	$ 37,862	$ 28,044	$ 9,818	35.0 %
Banking Solutions	9,703	2,901	6,802	234.5 %
Payments and Transactional Documents	28,373	29,832	(1,459)	(4.9)%
Other	(2,199)	(3,075)	876	28.5 %
Total measure of segment profit	$ 73,739	$ 57,702	$ 16,037	27.8 %

A reconciliation of the measure of total segment profit to our GAAP loss before income taxes is as follows:

	Fiscal Year Ended June 30,	
	2018	2017
	(in thousands)	
Total measure of segment profit	$ 73,739	$ 57,702
Less:		
Amortization of acquisition-related intangible assets	(22,076)	(24,246)
Goodwill impairment charge	—	(7,529)
Fixed asset charge	—	(2,399)
Stock-based compensation plan expense	(34,200)	(31,913)
Acquisition and integration-related expenses	(2,564)	(2,596)
Restructuring expenses	(1,495)	(547)
Legal settlement	(1,269)	—
Minimum pension liability adjustments	(24)	(1,079)
Other non-core income	150	223
Global ERP system implementation and other costs	(6,430)	(8,804)
Other expense, net	(4,706)	(17,086)
Income (loss) before income taxes	$ 1,125	$ (38,274)

Cloud Solutions

Revenues from our Cloud Solutions segment increased $27.5 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, inclusive of a favorable impact of foreign currency exchange rates of $2.3 million, due primarily to increased revenue of $20.8 million from our settlement network solutions and $6.7 million from our legal spend management solutions. Our legal spend management solutions revenue for the fiscal year ended June 30, 2017 included the revenue impact of a large customer program which went live, impacting our year over year growth rate in the fiscal year ended June 30, 2018. Segment profit increased $9.8 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, inclusive of a favorable impact of foreign currency exchange rates of $0.5 million, due primarily to the revenue increase described above, partially offset by increased cost of revenues of $9.8 million and increased operating expenses of $7.9 million primarily related to increased sales and marketing costs.

Banking Solutions

Revenues from our Banking Solutions segment increased $12.6 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, due primarily to increased services revenue of $5.3 million as a result of our continued deployment of our newer banking solutions and increased subscriptions and transactions revenue as we continued to expand the number of customers on our SaaS platforms, of $3.3 million. The Banking Solutions segment also recorded other revenues of $2.6 million, which represented the one-time buyout of a revenue share arrangement. Segment profit increased $6.8 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, due primarily to the revenue increase described above, partially offset by increased cost of revenues of $4.1 million and increased sales and marketing expenses of $1.1 million.

Payments and Transactional Documents

Revenues from our Payments and Transactional Documents segment increased $3.2 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, inclusive of a favorable impact of foreign currency exchange rates of $4.0 million, due primarily to increased subscriptions and transactions revenue of $9.3 million from our European payments and transactional documents solutions, partially offset by decreased software license revenue of $3.3 million and decreased service and maintenance revenue of $1.7 million. The segment profit decrease of $1.5 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, inclusive of a favorable impact of foreign currency exchange rates of $1.4 million, was primarily attributable to increased sales and marketing expenses of $3.2 million and increased product development and engineering expenses of $1.3 million, partially offset by the revenue increase described above.

Other

Revenues and profit from our Other segment remained relatively consistent for the fiscal year ended June 30, 2018 as compared to the prior fiscal year.

Revenues by Category

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2018	2017	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Revenues:				
Subscriptions and transactions	$ 262,363	$ 222,997	$ 39,366	17.7 %
Software licenses	10,277	11,685	(1,408)	(12.0)%
Service and maintenance	114,926	109,633	5,293	4.8 %
Other	6,530	5,097	1,433	28.1 %
Total revenues	$ 394,096	$ 349,412	$ 44,684	12.8 %

Subscriptions and Transactions

Revenues from subscriptions and transactions increased $39.4 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, inclusive of a favorable impact of foreign currency exchange rates of $3.0 million. The overall revenue increase was due principally to increases in revenue from our Cloud Solutions segment and Payments and Transactional Documents segment of $26.6 million and $9.3 million, respectively, as well as an increase in revenue from our Banking Solutions segment of $3.3 million.

Software Licenses

Revenues from software licenses decreased $1.4 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, primarily as a result of decreased revenue from our Payments and Transactional Documents segment of $3.3 million, partially offset by increased revenue from our Banking Solutions segment and Other segment of $1.0 and $0.9 million, respectively. The decreased revenue from our Payments and Transactional Documents segment was primarily due to our European payments and documents automation solutions, where we are consciously de-emphasizing software license sales in favor of our cloud payments products.

Service and Maintenance

Revenues from service and maintenance increased $5.3 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, inclusive of a favorable impact of foreign currency exchange rates of $2.7 million. The overall revenue increase was primarily the result of increased revenue from our Banking Solutions segment and Cloud Solutions segment of $5.8 million and $0.8 million, respectively, partially offset by decreased revenue from our Payments and Transactional Documents segment of $1.7 million, primarily due to our European payments and documents automation solutions.

Other

Our other revenues consist principally of equipment and supplies sales, which remained minor components of our overall revenue. The increase in other revenues was due to the impact in fiscal 2018 of $2.6 million in our Banking Solutions segment, arising from the one-time buyout of a revenue share arrangement.

Cost of Revenues

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2018	2017	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Cost of revenues:				
Subscriptions and transactions	$ 117,076	$103,789	$ 13,287	12.8 %
Software licenses	815	818	(3)	(0.4)%
Service and maintenance	52,519	53,570	(1,051)	(2.0)%
Other	3,032	3,737	(705)	(18.9)%
Total cost of revenues	$ 173,442	$161,914	$ 11,528	7.1 %
Gross profit	$ 220,654	$187,498	$ 33,156	17.7 %

Subscriptions and Transactions

Subscriptions and transactions costs as a percentage of subscriptions and transactions revenues decreased slightly to 45% for the fiscal year ended June 30, 2018 as compared to 47% for the prior fiscal year, due primarily to the revenue increases in our legal spend management and settlement network solutions.

Software Licenses

Software license costs as a percentage of software license revenues remained consistent at 8% for the fiscal year ended June 30, 2018 as compared to 7% for the prior fiscal year.

Service and Maintenance

Service and maintenance costs as a percentage of service and maintenance revenues decreased to 46% for the fiscal year ended June 30, 2018 as compared to 49% for the prior fiscal year, due primarily to gross margin improvement in our Banking Solutions segment, as new customers continued to deploy our solutions.

Other

Other costs include the costs associated with equipment and supplies that we resell, as well as freight, shipping and postage costs associated with the delivery of our products and remain minor components of our business.

Operating Expenses

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2018	2017	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Operating expenses:				
Sales and marketing	$ 86,095	$ 77,523	$ 8,572	11.1 %
Product development and engineering	57,500	53,055	4,445	8.4 %
General and administrative	49,869	46,535	3,334	7.2 %
Amortization of acquisition-related intangible assets	22,076	24,246	(2,170)	(8.9)%
Goodwill impairment charge	—	7,529	(7,529)	(100.0)%
Total operating expenses	$ 215,540	$ 208,888	$ 6,652	3.2 %

Sales and Marketing

Sales and marketing expenses increased by $8.6 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, due primarily to an increase in employee related costs of $7.3 million due in part to the impact of our recent acquisitions and the overall growth of our business.

Product Development and Engineering

Product development and engineering expenses increased by $4.4 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, principally as a result of an increase in headcount related costs as we continued to invest in the development of innovative, feature-rich products.

General and Administrative

General and administrative expenses increased by $3.3 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, due primarily to increased employee related costs of $3.7 million, the non-recurring settlement of a legal claim of $1.3 million and facilities related costs of $0.8 million, partially offset by decreased global ERP implementation and other costs of $2.4 million.

Amortization of Acquisition-related Intangible Assets

The decrease in amortization expense of $2.2 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year occurred as a result of amortization rates decreasing over the underlying asset lives.

Goodwill Impairment Charge

For the fiscal year ended June 30, 2017, we recorded a $7.5 million goodwill impairment charge as a result of an impairment test conducted for our Intellinx reporting unit. There were no similar charges in fiscal 2018.

Other Income (Expense), Net

	Fiscal Year Ended June 30,		Increase (Decrease) Between Periods	
	2018	2017	$ Change Inc (Dec)	% Change Inc (Dec)
	(Dollars in thousands)			
Interest income	$ 273	$ 451	$ (178)	(39.5)%
Interest expense	(11,170)	(17,059)	5,889	34.5 %
Other income (expense), net	6,908	(276)	7,184	2,602.9 %
Other expense, net	$ (3,989)	$ (16,884)	$ 12,895	76.4 %

Other Income (Expense), Net

Other expense, net decreased $12.9 million for the fiscal year ended June 30, 2018 as compared to the prior fiscal year, primarily due to decreases in the amortization of debt discount costs upon the maturity of our Notes on December 1, 2017 as well as non-recurring other income of $6.1 million attributable to the sale of a cost method investment.

Provision for Income Taxes

We recorded an income tax benefit of $8.2 million and $5.1 million for the fiscal years ended June 30, 2018 and 2017, respectively. The income tax benefit for the fiscal year ended June 30, 2018 was primarily due to a discrete tax benefit of $8.0 million arising from the impact of the U.S. Tax Cuts and Jobs Act in the United States. The income tax benefit for the fiscal year ended June 30, 2017 includes a discrete tax benefit in Switzerland of $4.5 million related to the impairment of its investment in Intellinx Ltd. (a wholly owned subsidiary). Please refer to *Note 17 Income Taxes* to our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for further details regarding this matter.

Liquidity and Capital Resources

We are party to a credit agreement with Bank of America, N.A. and certain other lenders that provides for a credit facility in the amount of up to $300 million (the Credit Facility). We also have the right to request an increase to the aggregate commitments to the Credit Facility of up to $150 million, subject to specified conditions. The Credit Facility expires in July 2023. During the fiscal year ended June 30, 2019, we used $40.0 million of cash on hand to pay down a portion of the borrowings under our Credit Facility. At June 30, 2019, borrowings were $110 million and we were in compliance with all covenants associated with the Credit Facility.

During the fiscal year ended June 30, 2019, warrant holders net exercised warrants for approximately 932 thousand shares of our common stock and we issued shares of common stock in the same amount. All of the warrant exercises were net settled and there were no warrants outstanding as of June 30, 2019.

We have financed our operations primarily from cash provided by operating activities, the sale of our common stock and debt proceeds. We have historically generated positive operating cash flows. We believe that the cash generated from our operations and the cash and cash equivalents we have on hand will be sufficient to meet our operating requirements for the foreseeable future. If our existing cash resources along with cash generated from operations is insufficient to satisfy our operating requirements, we may need to sell additional equity or debt securities or seek other financing arrangements.

One of our financial goals is to maintain and improve our capital structure. The key metrics we focus on in assessing the strength of our liquidity and a summary of our cash activity for the fiscal years ended June 30, 2019 and 2018 are summarized in the tables below:

	June 30, 2019	June 30, 2018
	(in thousands)	
Cash and cash equivalents	$ 92,164	$ 121,860
Marketable securities	7,541	10,012
Borrowings under credit facility	110,000	150,000

	Fiscal Year Ended June 30,	
	2019	2018
	(in thousands)	
Cash provided by operating activities	78,277	70,750
Cash used in investing activities	(66,218)	(30,677)
Cash used in financing activities	(37,413)	(38,824)
Effect of exchange rates on cash	(1,458)	(1,205)

Cash, cash equivalents and marketable securities. At June 30, 2019, our cash and cash equivalents of $92.2 million consisted primarily of cash deposits held at major banks and money market funds. The $29.7 million decrease in cash and cash equivalents from June 30, 2018 was primarily due to the repayment of amounts borrowed under the Credit Facility of $40.0 million, cash used to fund business acquisitions, net of cash acquired, of $24.0 million, the acquisition of a building in the UK of $20.7 million and capital expenditures, including capitalization of software costs, of $33.1 million, partially offset by proceeds from sales of available for sale securities of $11.0 million and cash generated from operations of $78.3 million.

At June 30, 2019, our marketable securities of $7.5 million consisted of U.S. government debt securities.

Cash, cash equivalents and marketable securities included approximately $63.0 million held by our foreign subsidiaries as of June 30, 2019. During the three months ended September 30, 2018, we repatriated $20.8 million from our UK subsidiary. We continue to permanently reinvest the earnings, if any, of our international subsidiaries other than the UK and Switzerland and therefore we do not provide for U.S. income taxes that could result from the distribution of foreign earnings from our international subsidiaries other than the UK and Switzerland. If our reinvestment plans change based on future events and we decide to repatriate amounts from our international subsidiaries other than the UK and Switzerland to fund our domestic operations, those amounts would generally become subject to state tax in the U.S. to the extent there were cumulative profits in the foreign subsidiary from which the distribution to the U.S. was made.

Cash and cash equivalents held by our foreign subsidiaries are denominated in currencies other than U.S. Dollars. Decreases primarily in the foreign currency exchange rate of the British Pound Sterling to the U.S. Dollar decreased our overall cash balances by approximately $1.5 million for the fiscal year ended June 30, 2019. Further changes in the foreign currency exchange rates of the British Pound Sterling and other currencies could have a significant effect on our overall cash balances, however, we continue to believe that our existing cash balances, even in light of the foreign currency volatility we frequently experience, are adequate to meet our operating requirements for the foreseeable future.

Operating Activities. Operating cash flow is derived by adjusting our net income or loss for non-cash operating items, such as depreciation and amortization, stock-based compensation plan expense, deferred income tax benefits or expenses, and impairment charges and changes in operating assets and liabilities, which reflect timing differences between the receipt and payment of cash associated with transactions and when they are recognized in our results of operations. Cash generated from operations increased by $7.5 million for the fiscal year ended June 30, 2019 as compared to the prior fiscal year. The increase was primarily related to an increase in cash flows from customer account liabilities of $8.3 million, accounts receivable of $5.4 million and an increase in non-cash adjustments to our net income of $3.8 million, partially offset by decreases in cash flows from prepaid expense and other current assets of $2.7 million, other assets of $2.9 million and accrued expense of $3.8 million.

At June 30, 2019, we had U.S. net operating loss carryforwards of $107.4 million, of which $104.1 million expire at various times through fiscal year 2037 and $3.3 million have no statutory expiration date. In addition, we had Switzerland net operating loss carryforwards of $1.3 million which expire in fiscal year 2024 and other foreign net operating loss carryforwards of $27.9 million, primarily in Europe and Israel, which have no statutory expiration date. We also have approximately $7.2 million of research and development tax credit carryforwards available, which expire at various points through fiscal year 2039. Our operating losses and tax credit carryforwards may be subject to limitations under provisions of the Internal Revenue Code.

At June 30, 2019, a substantial portion of our deferred tax assets have been reserved since, given the available evidence, it was deemed more likely than not that these deferred tax assets would not be realized.

Investing Activities. Investing cash flows consist primarily of capital expenditures, inclusive of capitalized software costs, investment purchases and sales and cash used for the acquisition of businesses and assets. The $35.5 million increase in net cash used in investing activities for the fiscal year ended June 30, 2019 as compared to the prior fiscal year was primarily due to an increase in cash used to fund business acquisitions, net of cash acquired, of $18.3 million, cash used for the purchase of a building in Reading, UK in January 2019 for approximately $20.7 million and an increase in cash used for capital expenditures of $11.7 million, partially offset by a decrease in the purchase of available for sale securities of $5.8 million, an increase in proceeds from available for sale securities of $4.8 million and an increase in proceeds from the sale of investments of $4.6 million. When it is ready for its intended use, the building purchased in the UK will ultimately replace our current Reading, UK building as our European headquarters.

Financing Activities. Financing cash flows consist primarily of repurchases of common stock, issuance and repayment of debt, and proceeds from the sale of shares of common stock through employee equity incentive plans.

Contractual Obligations

Following is a summary of future payments that we are required to make under existing contractual obligations as of June 30, 2019:

	Payment Due by Fiscal Year				
	2020	2021-2022	2023-2024	Thereafter	Total
			(in thousands)		
Credit Facility					
Principal payment	$ —	$ —	$ 110,000	$ —	$ 110,000
Interest payments [1]	3,377	6,925	3,777	—	14,079
Commitment fee [2]	333	665	345	—	1,343
Note payable	185	185	—	—	370
Operating leases	5,612	10,639	6,603	11,665	34,519
Purchase commitments	9,112	6,065	336	—	15,513
Total contractual obligations	$ 18,619	$ 24,479	$ 121,061	$ 11,665	$ 175,824

(1) The Credit Facility carries a variable rate of interest. Interest payments were estimated using the applicable interest rate as of June 30, 2019 net of the impact of interest rate swaps we have in place.

(2) The Credit Facility agreement includes a commitment fee, which we have included in the table above, based on the applicable interest rate as of June 30, 2019 and our unborrowed capacity of $190 million.

Purchase orders are not included in the table above. Our purchase orders represent authorizations to purchase rather than binding agreements. The contractual obligation amounts in the table above are associated with agreements that are enforceable and legally binding and that specify all significant terms, including: fixed or minimum services to be used; fixed, minimum or variable price provisions; and the approximate timing of the transaction. In addition to the base terms, we have certain options to extend the terms of our agreements. Payments are fixed for the initial terms and are subject to increase in the event that we elect to extend the service. Obligations under contract that we can cancel without a significant penalty are not included in the table above.

Our estimate of unrecognized tax benefits for which cash settlement may be required, in the amount of $1.3 million, has been excluded from the table above. These amounts have been excluded because, as of June 30, 2019, we are unable to estimate the timing of future cash outflows, if any, associated with these liabilities as we do not currently anticipate settling any of these tax positions with cash payment in the foreseeable future.

The contractual obligations table above also excludes our estimate of the contributions we will make to our Swiss defined benefit pension plan in fiscal year 2020, which is $1.8 million based on foreign exchange rates in effect on June 30, 2019. We have not disclosed contributions for periods after fiscal year 2020, as those amounts are subject to future changes.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements during the fiscal year ended June 30, 2019.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Interest rate risk

Our exposure to financial risk, including changes in interest rates, relates primarily to our cash and cash equivalents and marketable securities. Our cash and cash equivalents typically consist of demand deposit accounts, money market mutual funds and U.S. Treasury securities. Based on our average cash and cash equivalents balance, average actual interest rates and actual interest income during the respective annual periods, a 100 basis point increase in interest rates would result in a hypothetical increase of approximately $0.9 million, $1.0 million and $1.1 million for the fiscal years ended June 30, 2019, 2018 and 2017, respectively, in our results of operations and cash flows. A 100 basis point decrease in interest rates would reduce our interest income to zero.

Our marketable securities are held in U.S. corporate and government debt securities with maturities of less than one year. A 100 basis point change in interest rates would not have had a significant impact on our income from marketable securities for the fiscal years ended June 30, 2019, 2018 and 2017.

Our Credit Facility bears interest at variable interest rates. We have entered into interest rate swap agreements to minimize our exposure to interest rate fluctuations under our Credit Facility.

Foreign currency exchange rate risk

We have significant operations located in the United Kingdom, where the functional currency is British Pound Sterling and in Switzerland, where the functional currency is the Swiss Franc. We also have operations in Australia, where the functional currency is the Australian Dollar; in Germany and France, where the functional currency is the European Euro; in Singapore, where the functional currency is the Singapore Dollar; in Canada, where the functional currency is the Canadian Dollar; in Indonesia, where the functional currency is the Indonesian Rupiah; in China, where the functional currency is the Chinese Yuan Renminbi; in Malaysia, where the functional currency is the Malaysian Ringgit and in Thailand, where the functional currency is the Thai Baht. We have not entered into any foreign currency hedging transactions or other instruments to minimize our exposure to foreign currency exchange rate fluctuations nor do we presently plan to in the future.

Foreign currency translation risk

The following sensitivity analysis is based on a hypothetical 10 percent increase or decrease in foreign currency exchange rates and presents the impact that such an increase or decrease would have had on our cash balances as of June 30, 2019 and 2018:

	Effect of a 10% Increase or Decrease in Average Exchange Rates	
	Cash and cash equivalents	
	2019	2018
	(in thousands)	
Between U.S. Dollar and:		
British Pound Sterling (+/-)	$ 2,435	$ 3,846
Swiss Franc (+/-)	3,457	2,175
European Euro (+/-)	371	312
Australian Dollar (+/-)	320	293

A 10% increase or decrease in the exchange rate between the Israeli Shekel and the U.S. Dollar, the Singapore Dollar and the U.S. Dollar, the Canadian Dollar and the U.S. Dollar, the Indonesian Rupiah and the U.S. Dollar, the Chinese Yuan Renminbi and the U.S. Dollar, the Malaysian Ringgit and the U.S. Dollar and the Thai Baht and the U.S. Dollar would not have had a significant impact on our cash and cash equivalents at June 30, 2019 or June 30, 2018.

The following sensitivity analysis is based on a hypothetical 10 percent increase or decrease in foreign currency exchange rates and presents the impact that such an increase or decrease would have had on our revenue and net income (loss) for the fiscal years ended June 30, 2019, 2018 and 2017:

	Effect of a 10% Increase or Decrease in Average Exchange Rates					
	Revenue			Net income (loss)		
	2019	2018	2017	2019	2018	2017
	(in thousands)					
Between U.S. Dollar and:						
British Pound Sterling (+/-)	$ 9,975	$ 9,149	$ 8,042	$ 977	$ 1,127	$ 268
Swiss Franc (+/-)	3,870	3,976	3,496	190	637	544
Israeli Shekel (+/-)	803	769	547	775	954	1,847
European Euro (+/-)	358	382	363	16	17	20

A 10% increase or decrease in the average exchange rate between the Australian Dollar and the U.S. Dollar; the Singapore Dollar and the U.S. Dollar; the Canadian Dollar and the U.S. Dollar; the Indonesian Rupiah and the U.S. Dollar, the Chinese Yuan Renminbi and the U.S. Dollar, the Malaysian Ringgit and the U.S. Dollar and the Thai Baht and the U.S. Dollar would not have had a significant impact on our revenue or net income (loss) for the fiscal years ended June 30, 2019, 2018 or 2017.

Foreign currency transaction risk

Foreign currency transaction gains and losses are generally not significant and our financial results would not be significantly impacted in the event of a 10% increase or decrease in the average exchange rates between the U.S. dollar and the respective functional currencies of our international subsidiaries.

Item 8. Consolidated Financial Statements and Supplementary Data.

BOTTOMLINE TECHNOLOGIES (de), INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Bottomline Technologies (de), Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Bottomline Technologies (de), Inc. (the Company) as of June 30, 2019 and 2018, the related consolidated statements of comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended June 30, 2019, and the related notes and financial statement schedule listed in the Index at Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at June 30, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of June 30, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated August 29, 2019 expressed an unqualified opinion thereon.

Adoption of ASU No. 2014-09

As discussed in Note 3 to the consolidated financial statements, the Company changed its method of accounting for revenue in the year ended June 30, 2019 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), and the related amendments. See below for discussion of our related critical audit matter.

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 include 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.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Adoption of ASU No. 2014-09

Description of the Matter

As discussed above and in Note 3 to the consolidated financial statements, on July 1, 2018, the Company adopted ASU No. 2014-09 using the modified retrospective method and recognized the cumulative effect of initially applying the standard which reduced the Company's accumulated deficit on the date of adoption by $26.3 million. The implementation of ASU No. 2014-09 caused the Company to change various aspects of its revenue recognition policies and provide new, enhanced disclosures.

In implementing ASU No. 2014-09, the Company made a number of significant judgments, including those related to the identification of performance obligations, including whether the different promised goods and services are distinct, the allocation of variable consideration to performance obligations, and the disclosure of disaggregated revenue. As a result, auditing the Company's adoption of ASU No. 2014-09 required significant auditor judgment.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the ASU No. 2014-09 adoption process. This included testing controls over management's significant judgments with respect to the identification of performance obligations in the contracts, the allocation of variable consideration to each performance obligation, and disclosures required by ASU No. 2014-09.

To audit the Company's adoption of ASU No. 2014-09, we performed audit procedures that included, among others, evaluating the Company's judgments over whether promised goods or services in a contract are distinct in accordance with the standard and evaluating the allocation of variable consideration to each performance obligation by performing an independent assessment, in comparison to the standard, on a sample of customer contracts and comparing our assessment to that of management. In addition, we tested the Company's disclosures of disaggregated revenue by comparing them to the Company's disclosures presented outside of the financial statements and information regularly reviewed by the chief operating decision maker for evaluating the financial performance of operating segments. We also compared the disclosures to those required by the standard.

Revenue recognition for software licenses with significant customization

Description of the Matter

As discussed in Note 4 to the consolidated financial statements, certain of the Company's software arrangements require significant customization and modification and involve extended implementation periods. The Company accounts for the software license and professional services in these arrangements as a combined performance obligation. The Company recognizes revenue for the combined performance obligation over time and measures progress to completion based on labor hours incurred as a percentage of total expected labor hours to complete the contract. Accordingly, the revenue recognized for these arrangements is dependent upon estimates of the remaining labor hours that will be incurred in fulfilling the Company's obligations in the contract.

Auditing these revenues was especially challenging because of the significant estimation required by management to determine the total expected labor hours to complete the contract. Making this estimate requires the knowledge of project-specific circumstances, including the remaining performance obligations, the specific terms and conditions of the contract, and the effort required to deliver the obligations. Changes in this estimate can have a material effect on the amount of revenue recognized on these contracts.

How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the revenue recognition process for software licenses requiring significant customization. For example, we tested controls over management's review of the estimates of expected labor hours to complete the contract which is the most significant assumption affecting the amount of revenue recognized. Our audit procedures included, among others, evaluating the significant assumptions and the accuracy and completeness of the underlying data used in management's estimate. This included testing management's estimate of labor hours to complete the contract for material contracts through a combination of analytical procedures, inspection of budget documentation, and review of the contract with the customer to understand the remaining obligations in the contract. We also met with the project managers for significant contracts to discuss those estimates. In addition, we performed a retrospective review of actual hours incurred compared to previously estimated hours to evaluate the Company's historical accuracy in estimating expected labor hours.
	Capitalized Software Development Costs and Internal Use Software Costs
Description of the Matter	As discussed in Note 2 to the consolidated financial statements, the Company capitalizes costs for software that is to be sold, leased or otherwise marketed once technological feasibility has been established. The Company also capitalizes certain development costs that relate to internal use software incurred during the application development stage. The Company capitalized \$3.7 million and \$10.4 million, respectively, of capitalized software development costs and internal use software costs in the year ended June 30, 2019 and had total capitalized software development costs and internal use software costs, net of accumulated amortization, of \$13.2 million and \$21.1 million, respectively, as of June 30, 2019. Auditing the Company's capitalization of software costs was especially challenging because management's determination of which projects and development activities within those projects qualify for capitalization requires significant judgment, as only those costs incurred in certain stages of software development can be capitalized in accordance with the applicable accounting standards.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's capitalized software development and internal use software costs processes. This included testing controls over management's determination of which projects and costs qualify for capitalization in accordance with the applicable accounting standards. To test the Company's capitalization of software costs, we performed audit procedures that included, among others, inspecting underlying documentation to evaluate whether the costs were capitalizable under the applicable accounting standards. We also inquired of project managers for significant projects to assess the nature of the costs, the time devoted to capitalizable activities and the underlying documentation.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1991.

Boston, Massachusetts
August 29, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Bottomline Technologies (de), Inc.

Opinion on Internal Control over Financial Reporting

We have audited Bottomline Technologies (de), Inc.'s internal control over financial reporting as of June 30, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Bottomline Technologies (de), Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of June 30, 2019, based on the COSO criteria.

As indicated in the accompanying Management's Annual Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Experian Limited and BankSight Software Systems, Inc., which are included in the 2019 consolidated financial statements of the Company and constituted approximately 3 and 1 percent of total assets, respectively, as of June 30, 2019 and less than 1 percent of revenues, each, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Experian Limited and BankSight Software Systems, Inc.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of June 30, 2019 and 2018, the related consolidated statements of comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended June 30, 2019, and the related notes and financial statement schedule listed in the Index at Item 15(a)(2) and our report dated August 29, 2019 expressed an unqualified opinion thereon.

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 Annual 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/ Ernst & Young LLP

Boston, Massachusetts
August 29, 2019

BOTTOMLINE TECHNOLOGIES (de), INC.

CONSOLIDATED BALANCE SHEETS

(in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 92,164	$ 121,860
Cash held for customers	5,637	2,753
Marketable securities	7,541	10,012
Accounts receivable net of allowances for doubtful accounts of $824 at June 30, 2019 and $996 at June 30, 2018	77,285	74,305
Prepaid expenses and other current assets	30,434	19,781
Total current assets	213,061	228,711
Property and equipment, net	54,541	28,895
Goodwill	206,101	200,024
Intangible assets, net	168,349	161,785
Other assets	27,177	16,553
Total assets	$ 669,229	$ 635,968
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 10,947	$ 10,251
Accrued expenses and other current liabilities	33,945	34,994
Customer account liabilities	5,637	2,753
Deferred revenue	75,097	75,356
Total current liabilities	125,626	123,354
Borrowings under credit facility	110,000	150,000
Deferred revenue, non-current	17,062	23,371
Deferred income taxes	10,345	8,367
Other liabilities	26,819	19,944
Total liabilities	289,852	325,036
Stockholders' equity		
Preferred Stock, $.001 par value:		
Authorized shares-4,000; issued and outstanding shares-none	—	—
Common Stock, $.001 par value:		
Authorized shares-100,000; issued shares-46,995 at June 30, 2019 and 44,834 at June 30, 2018; outstanding shares-41,315 at June 30, 2019 and 39,028 at June 30, 2018	47	45
Additional paid-in-capital	721,438	678,549
Accumulated other comprehensive loss	(43,593)	(30,633)
Treasury stock: 5,680 shares at June 30, 2019 and 5,806 shares at June 30, 2018, at cost	(127,095)	(129,914)
Accumulated deficit	(171,420)	(207,115)
Total stockholders' equity	379,377	310,932
Total liabilities and stockholders' equity	$ 669,229	$ 635,968

See accompanying notes.

BOTTOMLINE TECHNOLOGIES (de), INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(in thousands, except per share amounts)

	Fiscal Year Ended June 30,		
	2019	**2018**	**2017**
Revenues:			
Subscriptions and transactions	$295,633	$262,363	$222,997
Software licenses	16,389	10,277	11,685
Service and maintenance	105,895	114,926	109,633
Other	4,045	6,530	5,097
Total revenues	421,962	394,096	349,412
Cost of revenues:			
Subscriptions and transactions	127,467	117,076	103,789
Software licenses	923	815	818
Service and maintenance	51,168	52,519	53,570
Other	3,161	3,032	3,737
Total cost of revenues	182,719	173,442	161,914
Gross profit	239,243	220,654	187,498
Operating expenses:			
Sales and marketing	95,265	86,095	77,523
Product development and engineering	67,364	57,500	53,055
General and administrative	52,199	49,869	46,535
Amortization of acquisition-related intangible assets	21,336	22,076	24,246
Goodwill impairment charge	—	—	7,529
Total operating expenses	236,164	215,540	208,888
Income (loss) from operations	3,079	5,114	(21,390)
Interest income	670	273	451
Interest expense	(3,783)	(11,170)	(17,059)
Other income (expense), net	6,928	6,908	(276)
Other income (expense), net	3,815	(3,989)	(16,884)
Income (loss) before income taxes	6,894	1,125	(38,274)
Benefit from income taxes	2,538	8,203	5,137
Net income (loss)	$ 9,432	$ 9,328	$ (33,137)
Basic and diluted net income (loss) per share	$ 0.23	$ 0.24	$ (0.88)
Shares used in computing net income (loss) per share:			
Basic	40,612	38,227	37,842
Diluted	41,691	39,326	37,842
Other comprehensive income (loss), net of tax:			
Unrealized gain (loss) on available for sale securities	14	(5)	(75)
Unrealized gain (loss) on interest rate hedging transactions	(3,875)	2,590	—
Minimum pension liability adjustments (net of income tax provision of $0, $300 and $1,558)	(4,730)	1,087	4,859
Foreign currency translation adjustments	(4,369)	(1,980)	559
Other comprehensive income (loss), net of tax:	$ (12,960)	$ 1,692	$ 5,343
Comprehensive income (loss)	$ (3,528)	$ 11,020	$ (27,794)

See accompanying notes.

BOTTOMLINE TECHNOLOGIES (de), INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Treasury Stock		Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			Shares	Amount		
Balance at June 30, 2016	41,602	$42	$591,800	$(37,668)	3,832	$ (75,832)	$(183,555)	$294,787
Issuance of common stock for employee stock purchase plan and upon exercise of stock options	32		301		(133)	2,674		2,975
Vesting of restricted stock awards	1,163	1	(1)					—
Stock compensation plan expense			31,913					31,913
Repurchase of common stock to be held in treasury					1,655	(39,913)		(39,913)
Tax benefit (deficit) associated with non qualified stock option exercises and forfeitures			(12)					(12)
Minimum pension liability adjustments, net of tax				4,859				4,859
Net income (loss)							(33,137)	(33,137)
Unrealized gain (loss) on available for sale securities, net of tax				(75)				(75)
Foreign currency translation adjustment				559				559
Balance at June 30, 2017	42,797	$43	$624,001	$(32,325)	5,354	$(113,071)	$(216,692)	$261,956
Issuance of common stock for employee stock purchase plan and upon exercise of stock options	70		388		(143)	3,121		3,509
Vesting of restricted stock awards	1,115	1	(1)					—
Stock compensation plan expense			34,200					34,200
Settlement of conversion premium upon maturity of the Notes	588	1	(1)					—
Settlement of note hedges			19,964		595	(19,964)		—
Warrant settlements	264		(2)					(2)
Cumulative effect of adoption of updated share-based compensation standard							249	249
Minimum pension liability adjustments, net of tax				1,087				1,087
Net income (loss)							9,328	9,328
Unrealized gain (loss) on available for sale securities, net of tax				(5)				(5)
Unrealized gain (loss) on interest rate hedging transactions				2,590				2,590
Foreign currency translation adjustment				(1,980)				(1,980)
Balance at June 30, 2018	44,834	$45	$678,549	$(30,633)	5,806	$(129,914)	$(207,115)	$310,932
Issuance of common stock for employees stock purchase plan and upon exercise of stock options	45	1	1,104		(126)	2,819		3,924
Vesting of Restricted stock awards	1,184							—
Stock compensation plan expense			41,790					41,790
Warrant settlements	932	1	(5)					(4)
Minimum pension liability adjustments, net of tax				(4,730)				(4,730)
Net income							9,432	9,432
Cumulative effect of adoption of updated revenue recognition standard							26,263	26,263
Unrealized gain on available for sale securities				14				14
Unrealized loss on interest rate hedging transactions				(3,875)				(3,875)
Foreign currency translation adjustment				(4,369)				(4,369)
Balance at June 30, 2019	46,995	$47	$721,438	$(43,593)	5,680	$(127,095)	$(171,420)	$379,377

See accompanying notes.

BOTTOMLINE TECHNOLOGIES (de), INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Fiscal Year Ended June 30,		
	2019	2018	2017
Operating activities:			
Net income (loss)	$ 9,432	$ 9,328	$ (33,137)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Amortization of acquisition-related intangible assets	21,336	22,076	24,246
Stock-based compensation plan expense	41,695	34,200	31,913
Depreciation and other amortization	22,911	19,994	19,528
Goodwill impairment charge	—	—	7,529
Gain on sale of investments	(7,599)	(2,419)	—
Deferred income tax benefit	(5,147)	(9,465)	(7,996)
Provision for allowances on accounts receivable	220	238	121
Amortization of debt issuance costs	414	928	1,426
Amortization of debt discount	—	5,574	12,641
Amortization of premium (discount) on investments	(137)	(62)	238
Loss on disposal of equipment	623	65	111
Loss (gain) on foreign exchange	497	(106)	(310)
Changes in operating assets and liabilities:			
Accounts receivable	(4,303)	(9,675)	(2,447)
Prepaid expenses and other current assets	(3,760)	(1,023)	(666)
Other assets	(3,120)	(222)	910
Customer account liabilities	3,023	(5,278)	—
Accounts payable	580	157	(900)
Accrued expenses	279	4,056	4,587
Deferred revenue	1,689	2,852	2,337
Other liabilities	(356)	(468)	953
Net cash provided by operating activities	78,277	70,750	61,084
Investing activities:			
Acquisition of businesses and assets, net of cash acquired	(24,036)	(5,741)	—
Acquisition of building	(20,700)	—	—
Purchases of investments	(230)	—	—
Proceeds from sale of investments	9,011	4,415	—
Purchases of available-for-sale securities	(8,381)	(14,188)	(14,058)
Proceeds from sales of available-for-sale securities	11,000	6,203	46,986
Capital expenditures, including capitalization of software costs	(33,083)	(21,376)	(28,173)
Proceeds from disposal of property and equipment	—	10	—
Insurance proceeds received for damage to equipment	201	—	—
Net cash provided by (used in) investing activities	(66,218)	(30,677)	4,755
Financing activities:			
Repurchase of common stock	—	—	(39,913)
Repayment of amounts borrowed under revolving credit facility	(40,000)	(189,750)	—
Amounts borrowed under revolving credit facility	—	150,000	—
Repayment of notes payable	(736)	(2,581)	—
Settlement of warrants	(4)	(2)	
Debt issuance costs related to credit facility	(597)	—	(2,163)
Proceeds from exercise of stock options and employee stock purchase plan	3,924	3,509	2,975
Net cash used in financing activities	(37,413)	(38,824)	(39,101)
Effect of exchange rate changes on cash	(1,458)	(1,205)	657
Increase (decrease) in cash and cash equivalents	(26,812)	44	27,395
Cash, cash equivalents and restricted cash at beginning of period	124,613	124,569	97,174
Cash, cash equivalents and restricted cash at end of period	$ 97,801	$124,613	$124,569
Cash and cash equivalents at end of period	$ 92,164	$121,860	$124,569
Cash held for customers at end of period	5,637	2,753	—
Cash, cash equivalents and restricted cash at end of period	$ 97,801	$124,613	$124,569
Supplemental disclosure of cash flow information:			
Cash paid during the fiscal year for:			
Interest, net of amounts capitalized	$ 3,936	$ 4,873	$ 2,964
Income taxes	$ 2,040	$ 3,109	$ 3,321
Non-cash financing activities:			
Issuance of common stock upon settlement of the warrants	$ 58,451	$ 12,739	$ —
Issuance of note payable to seller in connection with acquisition	$ —	$ 1,836	$ —
Issuance of common stock upon conversion of convertible senior notes	$ —	$ 19,736	$ —
Receipt of common stock upon settlement of Note Hedges	$ —	$ 19,964	$ —

See accompanying notes.

Note 1—Organization and Nature of Business

Bottomline Technologies (de), Inc. is a Delaware corporation that helps make complex business payments simple, smart, and secure. Corporations and banks rely on us for domestic and international payments, efficient cash management, automated workflows for payment processing and bill review, and fraud detection, behavioral analytics and regulatory compliance solutions. The majority of our revenues are derived from offerings sold as SaaS-based solutions and paid for on a subscription and transaction basis. Our products and services are sold to customers operating in many different industries throughout the world, but principally in the U.S., United Kingdom (UK) and continental Europe regions.

Note 2—Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include our accounts and the accounts of our subsidiaries, all of which are wholly owned. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates in the Preparation of Consolidated Financial Statements

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Estimates include, but are not limited to, revenue recognition, allowances for doubtful accounts, recoverability of deferred tax assets, determining the fair value associated with acquired assets and liabilities including acquired performance obligations, intangible asset and goodwill impairment, pension benefit obligations, accruals for uncertain tax positions and certain other of our accrued liabilities. Actual results could differ from those estimates.

Foreign Currency Translation

We have international subsidiaries in Europe, the Asia-Pacific region and Canada, whose functional currencies are typically the local currencies. Assets and liabilities of all of our international subsidiaries have been translated into U.S. dollars at year-end exchange rates, and results of operations and cash flows have been translated at the average exchange rates in effect during the year. Gains or losses resulting from foreign currency translation where the local currency is the functional currency are included as a component of accumulated other comprehensive income (loss). Foreign currency transaction gains and losses are included in results of operations as incurred and are not significant to our overall operations.

Cash and Cash Equivalents

We consider all highly liquid instruments with an original maturity of three months or less to be cash equivalents. The carrying value of these instruments approximates their fair value. At June 30, 2019, our cash equivalents consisted of demand deposit accounts and money market funds.

Cash and Cash Equivalents Held for Customers and Customer Account Liabilities

At June 30, 2019 and 2018, our consolidated balance sheets includes $5.6 million and $2.8 million, respectively, of cash and cash equivalents held for customers and a corresponding liability in the same amount. Cash and cash equivalents held for customers and customer account liabilities arise as a by-product of our Bottomline Payment Services Limited operations as it is customary to collect client funds and hold them for a short transient period before ultimately disbursing the amounts and settling the corresponding liability. Cash we hold on behalf of clients is segregated from our other corporate cash accounts and is not available for use by us other than to settle the corresponding client liability.

Marketable Securities

All marketable securities must be classified as one of the following: held to maturity, available for sale, or trading. At June 30, 2019, we held $7.5 million of marketable securities which consisted of U.S. corporate and government debt securities.

Our held to maturity investments, all of which mature within one year, are recorded at amortized cost and interest income is recognized in earnings when earned. The cost of securities sold is determined based on the specific identification method. At June 30, 2019 and 2018, the amortized cost of our held-to-maturity investments approximated their fair value.

Our securities classified as available for sale are recorded at fair value, with all unrealized gains or losses recorded as a component of accumulated other comprehensive income (loss). At June 30, 2019 and 2018, all of our available for sale securities had maturities of less than one year. The cost of securities sold is determined based on the specific identification method. At June 30, 2019 and 2018, our net unrealized loss associated with our investment securities was not significant.

The table below presents information regarding our marketable securities by major security type as of June 30, 2019 and 2018.

	June 30, 2019			June 30, 2018		
	Held to Maturity	Available for Sale	Total	Held to Maturity	Available for Sale	Total
	(in thousands)					
Marketable securities:						
Corporate and other debt securities	$ 62	$ 7,479	$ 7,541	$ 65	$ 9,947	$ 10,012
Total marketable securities	$ 62	$ 7,479	$ 7,541	$ 65	$ 9,947	$ 10,012

All of our available for sale marketable securities are classified as current assets. At June 30, 2019 and June 30, 2018, the difference between the fair value of our available for sale securities and their amortized cost was not significant.

The following table presents the aggregate fair values and gross unrealized losses for those available for sale investments that were in an unrealized loss position as of June 30, 2019 and June 30, 2018, respectively, aggregated by investment category and the length of time that individual securities have been in a continuous loss position:

	At June 30, 2019		At June 30, 2018	
	Less than 12 Months			
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
	(in thousands)			
Government—U.S.	800	(1)	6,480	(6)
Total	$ 800	$ (1)	$ 6,480	$ (6)

Other Investments

We have certain other investments for which there is no readily determinable fair value. These investments are recorded at cost, less impairment (if any) plus or minus adjustments for observable price changes. The carrying value of these investments was $0.7 million and $4.4 million at June 30, 2019 and 2018, respectively, and they are reported as a component of our other assets. At June 30, 2019, we reviewed the carrying value of these investments and concluded that they were not impaired and as of that date, we are unable to exercise significant influence over the investees.

Sales of Investments

Fiscal Year 2019

During fiscal 2019, we liquidated a $0.4 million investment, received cash proceeds of $7.7 million and recorded a gain on sale of $7.3 million as a component of other income in our consolidated statement of comprehensive income (loss). In addition, we acquired the remaining outstanding capital stock of BankSight Software Systems, Inc. (BankSight) for $2.8 million in cash and 40,000 shares of our common stock, with stock vesting conditions tied to continued employment. BankSight was a related party to us as a result of a $3.5 million minority investment we had in preferred stock of BankSight. The preferred stock underlying our investment was not in-substance common stock.

Please refer to *Note 6 Acquisitions* for further discussion on the BankSight acquisition.

Fiscal Year 2018

During fiscal 2018, we liquidated a $3.0 million investment and recorded, as a component of other income, a gain on the sale of this investment of $2.4 million. A portion of the proceeds due to us, $1.0 million, was received in June 2019.

In addition, in the overall liquidation of this investment in fiscal 2018 we received a payment of $2.6 million which represented the buyout of a revenue share arrangement that we had with the predecessor company and a payment of $3.7 million in exchange for our release of certain market exclusivity and distribution rights. These amounts were recorded as components of other revenue and other income, respectively, in our consolidated statement of comprehensive income (loss) for the fiscal year ended June 30, 2018. The other revenue was recorded in our Banking Solutions segment.

Concentration of Credit Risk

Financial instruments that potentially subject us to significant concentrations of credit risk consist of cash and cash equivalents and accounts receivable. We had approximately $82.6 million of cash and cash equivalents invested with six financial institutions at June 30, 2019. Balances of cash and cash equivalents are typically in excess of any insurance, such as FDIC coverage, that may protect our deposits.

Our accounts receivable are reported in our consolidated balance sheets net of allowances for uncollectible accounts. We believe that the concentration of credit risk with respect to accounts receivable is limited due to the large number of companies and diverse industries comprising our customer base. On-going credit evaluations are performed, generally with a focus on new customers or customers with whom we have had no prior collections history, and collateral is generally not required. We maintain reserves for potential losses based on customer specific situations as well as our historic experience and such losses, in the aggregate, have not historically exceeded our expectations. There were no customers that, individually, accounted for more than 10% of our consolidated accounts receivable balance at June 30, 2019 or 2018. For the fiscal years ended June 30, 2019, 2018 and 2017, we had no customer that accounted for 10% or greater of our consolidated revenues.

Financial Instruments

The fair value of our financial instruments, which include cash and cash equivalents, cash held for customers, marketable securities, accounts receivable, accounts payable, customer account liabilities, derivative interest rate swaps and debt drawn under our Credit Facility, as defined in *Note 11 Indebtedness*, are based on assumptions concerning the amount and timing of estimated future cash flows and assumed discount rates reflecting varying degrees of perceived risk. Please refer to *Note 5 Fair Value* for further details on the fair value of these financial instruments.

Accounts Receivable

Accounts receivable includes unbilled receivables of approximately $6.9 million and $8.9 million at June 30, 2019 and 2018, respectively. Unbilled receivables include revenues recognized for which billings have not yet been presented to the customers.

Property and Equipment

Property and equipment are stated at cost, net of depreciation. Depreciation is recorded on a straight-line basis over the estimated useful lives of the assets as follows:

Property, equipment, furniture, fixtures and vehicles	3-7 years
Technical equipment	3-5 years
Building (Reading, England)	50 years
Leasehold improvements	Lower of estimated life or remaining lease term

Periodically, based on specific transactions, we may assign a life outside of the general range of useful lives noted here if a particular asset's estimated period of use falls outside of the normal range.

Goodwill and Other Intangible Assets

We initially record goodwill and other acquired intangible assets at their estimated fair values, and we review these assets periodically for impairment. Goodwill represents the excess of the purchase price over the fair value of identifiable tangible and intangible assets acquired and liabilities assumed in a business combination and is tested at least annually for impairment; historically during our fourth quarter.

Our specifically identifiable intangible assets, which consist principally of customer related assets and core technology, are reported net of accumulated amortization and are amortized over their estimated useful lives at amortization rates that are proportional to each asset's estimated economic benefit. We review the carrying value of these intangible assets annually, or more frequently if indicators of impairment are present.

In performing our review of the recoverability of goodwill and other intangible assets we consider several factors, including whether there have been significant changes in legal factors or the overall business climate that could affect the underlying value of an asset. We also consider whether there is an expectation that the asset will be sold or disposed of before the end of its originally estimated useful life. In the case of goodwill, we must estimate the fair value of the reporting unit to which the goodwill is assigned. If as a result of examining any of these factors we conclude that the carrying value of goodwill or any other intangible asset exceeds its estimated fair value, we will recognize an impairment charge.

Purchased software is classified as an intangible asset and is amortized on a straight-line basis over its estimated useful life, typically ranging from 3 to 5 years.

Advertising Costs

We expense advertising costs as incurred. Advertising costs were $2.9 million, $2.0 million and $2.6 million for the fiscal years ended June 30, 2019, 2018 and 2017, respectively.

Shipping and Handling Costs

We expense all shipping, handling and delivery costs in the period incurred, generally as a component of other cost of revenues.

Commissions Expense

Excluding certain arrangements within our Banking Solutions segment, for which commissions are earned as revenue is recorded over the period of project performance, substantially all software commissions are earned in the month in which a customer order is received. Commissions associated with professional services are typically earned in the month that services are rendered. Commissions associated with post-contract customer support arrangements and subscription-based arrangements are typically earned when the customer is billed for the underlying contractual period, or in the period the order is received. Commissions are normally paid within thirty days of the month in which they are earned. Prior to the adoption of the new revenue standard, commissions were expensed as incurred. Under the new revenue standard, we capitalize commission costs in connection with obtaining a contract if the period of benefit is greater than a year and we expect to recover the costs through future contract revenues. We expense costs capitalized ratably over the estimated period of benefit. Commission costs are record as a component of sales and marketing expense.

Research and Development Expenditures

Research and development costs incurred prior to the establishment of technological feasibility (for software to be sold, leased or otherwise marketed), or prior to application development (for internal-use software), are expensed as incurred and are reported as product development and engineering operating expenses in our statements of comprehensive income (loss).

Debt Issuance Costs

We incurred certain third party costs in connection with the Credit Facility principally related to underwriting and legal fees. These costs are included as part of our other assets on our consolidated balance sheets and are being amortized to interest expense ratably over the term of the Credit Facility.

Income Taxes and Income Tax Uncertainties

We recognize deferred tax assets and deferred tax liabilities based on differences in the financial reporting and tax basis of the underlying assets or liabilities, measured at tax rates that are expected to be in effect when the differences reverse. A valuation allowance to reduce the carrying value of deferred tax assets is recorded if, based on the weight of available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized.

In respect of income tax uncertainties, we perform a two-step analysis for all tax positions. The first step involves an evaluation of the underlying tax position based solely on technical merits (such as tax law) and the second step involves measuring the tax position based on the probability of it being sustained in the event of a tax examination. We recognize tax benefits at the largest amount that we deem more likely than not will be realized upon ultimate settlement of any tax uncertainty. Tax positions that fail to qualify for recognition are recognized in the period in which the more-likely-than-not standard has been reached, when the tax positions are resolved with the respective taxing authority or when the statute of limitations for tax examination has expired.

We record any interest or penalties accruing in respect of uncertain tax positions as a component of income tax expense.

Share-Based Compensation

We recognize expense for the estimated fair value of our share-based compensation arrangements. The expense associated with share-based payment awards is generally recognized on a straight-line basis over the award's vesting period.

Capitalized Software Costs

Capitalization of software development costs for software that is to be sold, leased or otherwise marketed begins upon the establishment of technological feasibility. The establishment of technological feasibility and the ongoing assessment of recoverability of capitalized software development costs requires considerable judgment by us with respect to certain factors, including, but not limited to, determining which projects and development activities within those projects qualify for capitalization, anticipated future gross revenues, estimated economic life, and changes in software and hardware technologies. Amortization of capitalized costs commence on the date of general release of the software using the greater of the straight-line method over the estimated useful life, or the ratio of revenue in the period to total expected revenues over the product's expected useful life. For the fiscal years ended June 30, 2019, 2018 and 2017, we capitalized $3.7 million, $3.2 million and $3.4 million, respectively, and recorded amortization expense of $3.8 million, $2.8 million and $2.2 million, respectively, of software development costs, excluding software developed for internal use. At June 30, 2019 and 2018, the net carrying value of capitalized software excluding software developed for internal use, which is included in intangible assets, net on our consolidated balance sheets, was $13.2 million and $13.3 million, respectively.

We capitalize certain development costs associated with internal use software incurred during the application development stage. We expense costs associated with preliminary project phase activities, training, maintenance and any post-implementation costs as incurred. For the fiscal years ended June 30, 2019, 2018 and 2017, we capitalized $10.4 million, $6.3 million and $6.6 million, respectively, of internal use software development costs associated with our SaaS-based technology platforms. Capitalized internal use software costs are normally amortized over estimated useful lives ranging from 2 to 7 years once the related project has been completed and deployed for use. For the fiscal years ended June 30, 2019, 2018 and 2017, we recorded amortization expense of $6.1 million, $5.2 million and $3.8 million, respectively, of capitalized internal use software costs associated with our SaaS-based technology platforms. At June 30, 2019 and 2018, the net carrying value of capitalized internal use software associated with our SaaS-based technology platforms, which is included in intangible assets, net on our consolidated balance sheets, was $21.1 million and $16.8 million, respectively.

Revenue Recognition

Effective July 1, 2018, we adopted a new accounting standard related to revenue recognition on a modified retrospective basis to all open contracts. Prior period amounts have not been restated; however, certain prior period amounts have been reclassified to conform to current period presentation. See *Note 3 Recent Accounting Pronouncements* and *Note 4 Revenue Recognition* to the consolidated financial statements for additional information about our revenue recognition policies and the related impact of the adoption of this standard.

Earnings per Share

We report both basic and diluted earnings per share. Basic earnings per share is calculated based on the weighted average number of shares of common stock outstanding and excludes the dilutive effect of warrants, stock options or any other type of convertible securities. Diluted earnings per share is calculated based on the weighted average number of shares of common stock outstanding and the dilutive effect of stock options, warrants and other types of convertible securities are included in the calculation. Dilutive securities are excluded from the diluted earnings per share calculation if their effect is anti-dilutive, such as in periods where we report a net loss.

Comprehensive Income or Loss

Comprehensive income or loss includes all changes in equity during a period from non-owner sources, such as net income or loss, foreign currency translation adjustments, certain pension adjustments, unrealized gains and losses on available for sale securities and unrealized gains and losses on our interest rate hedging transactions.

Note 3—Recent Accounting Pronouncements

Recently Adopted Pronouncements

Revenue Recognition: In May 2014, the Financial Accounting Standard Board (FASB) issued an accounting standard update for new revenue recognition guidance, superseding nearly all prior revenue recognition guidance. The new revenue standard outlines a single comprehensive model for accounting for revenue from contracts with customers and requires more detailed revenue disclosures. The core principle of the new standard is that revenue is to be recognized in a manner that depicts the transfer of promised goods or services to customers at amounts that reflect the consideration which the entity expects to be entitled under the arrangement.

We adopted the new revenue standard on July 1, 2018 using the modified retrospective method of adoption applied to open contracts at that date and upon adoption recorded a $26.3 million decrease to our accumulated deficit balance. The adjustments we recorded at transition were composed of:

	(in thousands)
Decrease to accounts receivable	$ (1,914)
Increase to contract assets	5,118
Decrease to deferred revenue	9,839
Increase to capitalized fulfillment costs	11,648
Increase to capitalized sales commissions	4,952
Tax effects	(3,380)
Total decrease to accumulated deficit	$ 26,263

The adjustment to accounts receivable relates primarily to unbilled receivables reclassified as contract assets. The increase to contract assets relates to revenue recognized in excess of the amount billed to the customer and the right to payment contingent on conditions other than simply the passage of time, such as the completion of a related performance obligation. Adjustments to deferred revenue relate primarily to the acceleration of revenue under the new standard as compared to the previous revenue recognition standard. This largely relates to transactions where, under legacy GAAP, revenue was deferred due to a lack of vendor specific objective evidence of fair value, transactions accounted for under a combined services arrangement which resulted in revenue recognition over time, transactions that had contractually stipulated price increases that were accounted for as the increases occurred and certain contingent revenue arrangements. Adjustments to capitalized fulfillment costs and capitalized sales commissions reflect the requirement to capitalize these costs under the new standard; prior to adoption, we expensed these costs as incurred. Capitalized costs are recorded as components of our prepaid expenses and other current assets and other assets in our consolidated balance sheet.

Please refer to *Note 4 Revenue Recognition* for further discussion of the adoption of this new standard.

Financial Instruments—Classification and Measurement: In January 2016, the FASB issued an accounting standard update which requires that entities measure equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) at fair value, with changes in fair value recognized in earnings. Entities will no longer be able to recognize unrealized holding gains and losses on equity securities classified as available for sale as a component of other comprehensive income (OCI). Subject to certain exceptions, entities will be able to elect to record equity investments without readily determinable fair values at cost, less impairment, plus or minus adjustments for observable price changes, with all such changes recognized in earnings. This standard does not change the guidance for classifying and measuring investments in debt securities and loans. We adopted this standard effective July 1, 2018 and it did not have an impact on our financial statements upon adoption, but will impact our financial statements in the future if observable price changes occur for investments we hold that do not have readily determinable fair values.

Statement of Cash Flows: In August and November of 2016, the FASB issued updated accounting standards which address the classification and presentation of certain cash receipts, cash payments and restricted cash in the statement of cash flows. We adopted these standards retrospectively on July 1, 2018. Our consolidated balance sheets include cash held for customers and a liability for the same amount. Cash held for customers and the related customer account liabilities arise from payment transactions we process on behalf of customers where we collect and hold customer funds for a short transient period before disbursing the cash and settling the liability. Cash we hold on behalf of customers is segregated from our other corporate cash accounts, is not available for use by us and is considered restricted cash. Prior to the adoption of this standard the change in cash held for customers and the corresponding liability were presented on a net basis in our consolidated statement of cash flows. As a result of adoption, the operating section of our consolidated statement of cash flows now reflects the impact on our total cash position, including the impact of changes in customer account liabilities.

During the fiscal year ended June 30, 2018, the retrospective adoption of this standard resulted in an increase in operating cash flows of approximately $5.3 million. The adoption of this standard did not have an impact on the fiscal 2017 statement of cash flows.

Defined Benefit Plan Expenses: In March 2017, the FASB issued an accounting standard update that changes the income statement presentation of defined benefit plan expense by requiring separation between operating expense (for the service cost component) and non-operating expense (for all other components of net periodic defined benefit cost). Under the revised standard, the service cost component is classified consistently with other compensation costs, while all other components are reported in other expense, net. We adopted this standard retrospectively on July 1, 2018 and reclassified approximately $0.7 million and $0.2 million from income from operations to other expense, net for the fiscal years ended June 30, 2018 and June 30, 2017, respectively, in our consolidated statements of comprehensive income (loss).

Accounting Pronouncements to be Adopted

Leases: In February 2016, the FASB issued an accounting standard update which requires balance sheet recognition of a lease liability and a corresponding right-of-use asset (ROU) for all leases with terms longer than twelve months. The pattern of recognition of lease related revenue and expenses will be dependent on its classification. Upon adoption we plan to elect the package of practical expedients and not reassess prior conclusions on whether contracts are or contain a lease, lease classification and treatment of initial direct costs. For all asset classes, we plan to adopt the lessee practical expedient to combine lease and non-lease components and will make a policy election to not recognize a ROU asset or lease liability for leases with a term less than twelve months. The standard is effective for us on July 1, 2019 and we will avail ourselves of the adoption expedient to not adjust our comparative period financial statements for the effects of the new standard or make additional required disclosures for periods prior to the effective date.

The adoption of the standard will have a material impact on our consolidated balance sheets as a result of the recognition of right-of-use assets and lease liabilities and will result in additional financial statement disclosures. We estimate that we will record lease liabilities and corresponding right-of-use assets that will not exceed 6% of our total assets as of June 30, 2019 upon adoption of the standard. However, our assessment of the impact of the standard is not yet completed and our actual transition adjustment could, for reasons not yet identified, fall outside of this estimated range. We do not currently expect the adoption of this standard to have a material impact on our consolidated statements of comprehensive income (loss) or consolidated statements of cash flows.

Financial Instruments—Credit Losses: In June 2016, the FASB issued an accounting standard update that introduces a new forward-looking approach, based on expected losses, to estimate credit losses on certain types of financial instruments including trade receivables. The estimate of expected credit losses will require entities to incorporate historical information, current information and reasonable and supportable forecasts. This standard also expands the disclosure requirements to enable users of financial statements to understand the entity's assumptions, models and methods for estimating expected credit losses. This standard is effective for us on July 1, 2020, with early application permitted. We are currently evaluating the anticipated impact of this standard on our financial statements as well as timing of adoption.

Goodwill Impairment: In January 2017, the FASB issued an accounting standard update to simplify the test for goodwill impairment which removes step 2 from the goodwill impairment test. Under the revised standard, an entity will perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The loss should not exceed the total amount of goodwill allocated to the reporting unit. The standard is effective for us on July 1, 2020 on a prospective basis, with early adoption permitted. We do not currently expect the adoption of this standard to have a material impact on our financial statements.

Derivatives and Hedging: In August 2017, the FASB issued an accounting standard update that more closely aligns the results of cash flow and fair value hedge accounting with risk management activities through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results in the financial statements. The guidance expands hedge accounting for both nonfinancial and financial risk components and refines the measurement of hedge results to better reflect an entity's hedging strategies. In October 2018, the FASB issued an accounting standard update to expand the list of United States benchmark interest rates permitted in the application of hedge accounting. The revised standard allows the use of the Overnight Index Swap rate based on the Secured Overnight Financing Rate as a U.S. benchmark interest rate for hedge accounting purposes. These standard updates are required to be adopted concurrently and are effective for us on July 1, 2019. We do not currently expect the adoption of these updates to have a material impact on our financial statements.

Share-Based Compensation—Nonemployee Share-Based Payment Accounting: In June 2018, the FASB issued an accounting standard update to simplify the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees. Under the revised standard, measurement of nonemployee awards will be fixed at the grant date by estimating the fair value of the equity instruments to be issued. Additionally, during the vesting period, nonemployee awards that contain a performance condition that affects the quantity or other terms of the award will be measured based on the probable outcome. Upon adoption, entities must recognize a cumulative-effect adjustment to retained earnings as of the beginning of the annual period of adoption for equity-classified nonemployee awards for which a measurement date has not been established and liability-classified nonemployee awards that have not been settled. This standard is effective for us on July 1, 2019. We do not currently expect the adoption of this standard to have a material impact on our financial statements.

Note 4—Revenue Recognition

Significant Accounting Policy

We generate revenue from the sale of SaaS or cloud-based services inclusive of both fixed and usage-based fees, perpetual and term software licenses, professional services such as consulting and implementation services and software support and maintenance. We recognize revenue as we transfer goods and services to customers, at amounts we expect to receive as consideration under enforceable contractual arrangements. Revenue is recognized as we satisfy contractual performance obligations, which can occur either at a point in time or over time. For perpetual and term software licenses that do not involve significant customization and for equipment and supplies sales, we normally record revenue at a point in time. For professional services, support and maintenance, stand-ready performance obligations with respect to our hosted or SaaS solutions and software licenses that are dependent on significant customization by us we normally record revenue over time.

We recognize revenue according to a five step model that involves:

- Identifying the contract (or contracts) with a customer;
- Identifying the performance obligations in the contract(s);
- Determining the transaction price;
- Allocating the transaction price to the contractual performance obligations, and
- Recognizing revenue as we satisfy the performance obligations.

We consider a contract to exist when we have legally enforceable rights and obligations with a customer. Our contracts can take a variety of forms but are normally in writing and include all major commercial terms such as the goods or services we will be obligated to transfer under the arrangement, the amount the customer is obligated to pay us upon fulfillment of our obligations and the payment terms. Our contracts do not contain a financing component.

Performance obligations in a contract are accounted for separately if they are determined to be distinct. We consider a performance obligation to be distinct if that good or service is separately identified from other items in the contract and if the customer can benefit from that performance obligation on its own or together with resources that are readily available to the customer. In assessing whether a customer can benefit from a performance obligation on its own, we consider factors such as the interdependency or interrelationship of the item with other goods or services in the contract, the complexity of any required integration or customization and the ability of the customer's personnel or other third party providers to fulfill like goods or services. If a particular good or service is not considered to be distinct, it is combined with other performance obligations in the arrangement and revenue is recognized as the combined performance obligation is transferred to the customer.

The transaction price is the amount of consideration we expect to be entitled to under a contract upon fulfillment of the performance obligations. The starting point for estimating the transaction price is the selling price stipulated in the contract, however we include in the determination of the overall transaction price an estimate of variable consideration to the extent it is probable that it will not result in a significant future reversal of revenue. Variable consideration can arise in our arrangements as a result of usage-based fees. For contracts with a long period over which usage-based fees can arise, or in contracts with customers with whom we do not have a reasonable operating history, we often constrain the amount of variable consideration included in the transaction price. We update our estimate of variable consideration at the end of each financial reporting period. We exclude from the determination of the transaction price sales and other taxes we bill to and collect from customers and remit to government authorities. Shipping and handling activities performed after the customer has obtained control of the good or service is accounted for as a fulfillment activity.

The transaction price is allocated to contractual performance obligations on a relative standalone selling price basis. We normally estimate standalone selling price using the adjusted market approach, maximizing the use of observable inputs and other factors that can include: the price we charge when we sell an item separately, our internal price lists and internal pricing guidelines, cost of delivering the item and overall gross margin expectations and information about the customer or class of customer. Revenue is recorded, either at a point in time or over time, as we satisfy the performance obligations in a contract.

Nature of Goods and Services

Subscriptions and Transactions: We generate subscriptions and transactions revenue through the provision of hosted and SaaS-based solutions which can include contractually fixed revenue amounts as well as usage-based fees. Our SaaS arrangements consist of an obligation for us to provide continuous access to a technology solution that we host, which we account for as a stand-ready performance obligation. These contracts may also be subject to variable pricing or overage fees based on customer processing, usage or volume. We recognize revenue for fixed subscription fees ratably over the non-cancelable term of the contract, commencing on the date the customer has access to the solution. In circumstances where we meet certain requirements to allocate variable consideration to a distinct service within a series of related services, we allocate variable consideration to each distinct period of service within the series. If we do not meet those requirements, we include an estimate of variable consideration in the transaction price and recognize it ratably over the non-cancelable term of the contract.

For certain of our hosted or SaaS solutions, customers are charged a fee for implementation services. In determining whether the implementation services are distinct from the hosting services we consider various factors, including the level of customization, complexity of the integration, the interdependency and interrelationship between the implementation services and the hosting services and the ability (or inability) of the customer's personnel or other service providers to perform the services. We have concluded that the implementation services in our hosting arrangements with multiple performance obligations are not distinct and therefore we recognize fees for implementation services ratably over the non-cancelable term of the hosting contract.

We license certain software on a subscription basis under contractual arrangements where customers pay a specified fee, inclusive of support and maintenance, for a time-based license right to use our software. These fees recur periodically, unless the customer opts to cancel their subscription arrangement with us. These contracts typically contain two distinct performance obligations: the software license and support and maintenance. The portion of the transaction price allocated to the license right is recognized at the point in time in which we have provided the customer access to the intellectual property and the license term has commenced. The portion of the transaction price allocated to support and maintenance is recognized ratably over the non-cancelable contract term.

Software Licenses: Software licenses revenue reflects fees we charge to license software on a perpetual basis. For software licenses that do not include significant customization we recognize revenue at the point in time where the customer has obtained access to the intellectual property and the license period has commenced.

Certain of our software arrangements require significant customization and modification and involve extended implementation periods. In these arrangements the professional services and software license are highly interdependent and we treat the software license and professional services as a combined performance obligation. We recognize revenue for the combined performance obligation over time and measure progress to completion based on labor hours incurred as a percentage of total expected labor hours. We believe the use of labor hours as an input measure provides a faithful depiction of the transfer of goods and services under these contracts.

Support and Maintenance: Our software licenses are generally sold with post-contract support which is comprised of technical support and unspecified software upgrades. Unspecified upgrades refer to software upgrades which we make available at our discretion and from time-to-time, on a "when and as available" basis. We account for post-contract support as a stand-ready performance obligation and recognize revenue ratably over the non-cancelable contract term which is typically one year.

Professional Services: Our professional services revenue is normally comprised of implementation, consulting and training services. Except for professional service performance obligations that form part of an overall, highly customized arrangement, our professional services typically represent distinct performance obligations and revenue is recognized as the services are performed.

Other: Other revenue is derived from the sale of equipment and supplies and is recognized at the point in time control transfers to the customer.

Disaggregation of Revenue

The table below presents our revenue disaggregated by major product category and the related financial statement classification of revenue for the twelve months ended June 30, 2019.

	Twelve Months Ended June 30, 2019						
	Settlement Network Solutions (1)	Legal Spend Management Solutions (1)	Banking Solutions	Payments and Transactional Documents	Healthcare (2)	Other (2)	Total
				(in thousands)			
Financial statement classification:							
Subscriptions and transactions	$ 102,230	$ 76,663	$ 67,680	$ 46,627	$ 2,220	$ 213	$ 295,633
Software licenses	1,220	—	4,583	7,067	944	2,575	16,389
Service and maintenance	22,447	—	21,693	49,755	3,584	8,416	105,895
Other	14	—	—	3,405	—	626	4,045
Total revenues	$ 125,911	$ 76,663	$ 93,956	$ 106,854	$ 6,748	$ 11,830	$ 421,962

(1) Cloud Solutions segment

(2) Other segment

Remaining Performance Obligations

The transaction price allocated to remaining performance obligations that are unsatisfied, or partially unsatisfied, as of June 30, 2019 represents contracted revenue that will be recognized in future periods. Our future performance obligations consist primarily of hosting and SaaS-based subscription obligations relating to future periods, contracted but uncompleted professional services obligations and support and maintenance obligations. The amount of revenue recognized during the twelve months ended June 30, 2019 from performance obligations satisfied in prior periods was not significant.

Revenue allocated to remaining performance obligations was $407.5 million as of June 30, 2019 of which we expect to recognize approximately $161.0 million over the next twelve months and the remainder thereafter. We exclude from our measure of remaining performance obligations amounts related to contracts with a term of twelve months or less, royalty based transactions and future transactional or usage-based fees for which the value of services transferred to the customer will correspond to the amount we will invoice for those services. These amounts are primarily derived from usage-based fees related to our hosted and SaaS-based solutions and royalties related to the licensing of our technology.

Contract Assets and Liabilities

The table below presents our accounts receivable, contract assets and deferred revenue balances as of July 1, 2018 and June 30, 2019.

	June 30, 2019	July 1, 2018	$ Change
		(in thousands)	
Accounts receivable	$ 77,285	$ 72,391	$ 4,894
Contract assets	5,135	5,118	17
Deferred revenue	92,159	88,888	3,271

Accounts receivable include amounts related to our contractual right to consideration for both completed and partially completed performance obligations that may not have been invoiced. Contract assets arise when we recognize revenue in excess of the amount billed to the customer and the right to payment is contingent on conditions other than simply the passage of time, such as the completion of a related performance obligation. Contract assets are classified in our consolidated balance sheets as other current assets for those contract assets with amortization periods of one year or less and other assets for contract assets with amortization periods greater than one year. Deferred revenue consists of billings or customer payments in excess of amounts recognized as revenue.

For the fiscal year ended June 30, 2019 we recognized $72.2 million in revenue from amounts that were included in deferred revenue as of July 1, 2018.

Contract Costs

We capitalize incremental costs incurred in connection with obtaining a contract if they have a period of benefit that is greater than one year and we expect to recover the costs through future contract revenues. Incremental costs incurred to obtain a contract relate to sales commissions. We also capitalize costs incurred in fulfilling a contract when the costs relate directly to a specifically identifiable customer contract, when the costs generate or enhance resources that we will use to satisfy performance obligations in the future and when the costs are expected to be recovered through future contract revenues. Capitalized costs to obtain a contract and capitalized fulfillment costs totaled $6.4 million and $16.4 million, respectively, at June 30, 2019.

Capitalized costs are amortized on a basis consistent with the transfer of the goods or services to which the asset relates. This results in capitalized costs being recognized on a ratable basis over the estimated period of future benefit, which is generally five years. We estimate the future period of benefit considering the current contract term, the impact of estimated customer renewal terms and the estimated life of the technology solution underlying the contracts. Amortization expense associated with costs of obtaining and costs of fulfilling a contract was $1.6 million and $3.5 million, respectively, for the fiscal year ended June 30, 2019, and were recorded as components of sales and marketing expense and cost of revenues, respectively, in our consolidated statement of comprehensive income (loss).

The following tables summarize the impact of adopting the new revenue standard on our consolidated financial statements as of and for the fiscal year ended June 30, 2019:

Condensed Consolidated Balance Sheet

	At June 30, 2019		
(in thousands)	**As Reported**	**Adjustments**	**Balances without adoption of new revenue standard**
ASSETS			
Current assets:			
Cash and cash equivalents	$ 92,164	$ —	$ 92,164
Cash held for customers	5,637	—	5,637
Marketable securities	7,541	—	7,541
Accounts receivable, net	77,285	792	78,077
Prepaid expenses and other current assets	30,434	(9,936)	20,498
Total current assets	213,061	(9,144)	203,917
Property and equipment, net	54,541	—	54,541
Goodwill	206,101	—	206,101
Intangible assets, net	168,349	—	168,349
Other assets	27,177	(15,471)	11,706
Total assets	$ 669,229	$(24,615)	$ 644,614
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable	$ 10,947	$ —	$ 10,947
Accrued expenses and other current liabilities	33,945	(701)	33,244
Customer account liabilities	5,637	—	5,637
Deferred revenue	75,097	4,800	79,897
Total current liabilities	125,626	4,099	129,725
Borrowings under credit facility	110,000	—	110,000
Deferred revenue, non-current	17,062	7,086	24,148
Deferred income taxes	10,345	(2,174)	8,171
Other liabilities	26,819	(29)	26,790
Total liabilities	289,852	8,982	298,834
Stockholders' equity			
Preferred Stock, $.001 par value	—	—	—
Common Stock, $.001 par value	47	—	47
Additional paid-in-capital	721,438	—	721,438
Accumulated other comprehensive loss	(43,593)	183	(43,410)
Treasury stock, at cost	(127,095)	—	(127,095)
Accumulated deficit	(171,420)	(33,780)	(205,200)
Total stockholders' equity	379,377	(33,597)	345,780
Total liabilities and stockholders' equity	$ 669,229	$(24,615)	$ 644,614

Condensed Consolidated Statement of Comprehensive Loss

(in thousands)	Fiscal Year Ended June 30, 2019 As Reported	Adjustments	Balances without adoption of new revenue standard
Revenues:			
Subscriptions and transactions	$295,633	$ (992)	$294,641
Software licenses	16,389	(4,551)	11,838
Service and maintenance	105,895	2,279	108,174
Other	4,045	(51)	3,994
Total revenues	421,962	(3,315)	418,647
Cost of revenues:			
Subscriptions and transactions	127,467	651	128,118
Software licenses	923	2	925
Service and maintenance	51,168	1,404	52,572
Other	3,161	(4)	3,157
Total cost of revenues	182,719	2,053	184,772
Gross profit	239,243	(5,368)	233,875
Operating expenses:			
Sales and marketing	95,265	1,571	96,836
Product development and engineering	67,364	283	67,647
General and administrative	52,199	—	52,199
Amortization of acquisition-related intangible assets	21,336	—	21,336
Total operating expenses	236,164	1,854	238,018
Income (loss) from operations	3,079	(7,222)	(4,143)
Other income, net	3,815	—	3,815
Income (loss) before income taxes	6,894	(7,222)	(328)
Benefit from income taxes	2,538	(295)	2,243
Net income	$ 9,432	$(7,517)	$ 1,915
Basic and diluted net income (loss) per share	$ 0.23	$ (0.18)	$ 0.05
Shares used in computing net income per share:			
Basic	40,612	—	40,612
Diluted	41,691	—	41,691
Other comprehensive loss, net of tax:			
Unrealized gain on available for sale securities	14	—	14
Unrealized loss on interest rate hedging transactions	(3,875)	—	(3,875)
Minimum pension liability adjustments	(4,730)	—	(4,730)
Foreign currency translation adjustments	(4,369)	183	(4,186)
Other comprehensive loss, net of tax:	(12,960)	183	(12,777)
Comprehensive loss	$ (3,528)	$(7,334)	$ (10,862)

Condensed Consolidated Statement of Cash Flows

(in thousands)	Fiscal Year Ended June 30, 2019 As Reported	Adjustments	Balances without adoption of new revenue standard
Operating activities:			
Net income	$ 9,432	$(7,517)	$ 1,915
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of acquisition-related intangible assets	21,336	—	21,336
Stock-based compensation plan expense	41,695	4	41,699
Depreciation and other amortization	22,911	—	22,911
Gain on sale of investment	(7,599)	—	(7,599)
Deferred income tax benefit	(5,147)	1,173	(3,974)
Provision for allowances on accounts receivable	220	—	220
Amortization of debt issuance costs	414	—	414
Amortization of debt discount	—	—	—
Amortization of discount on investments	(137)	—	(137)
Loss on disposal of equipment	623	—	623
Loss on foreign exchange	497	4	501
Changes in operating assets and liabilities:			
Accounts receivable	(4,303)	1,089	(3,214)
Prepaid expenses and other current assets	(3,760)	1,542	(2,218)
Other assets	(3,120)	2,349	(771)
Accounts payable	580	—	580
Accrued expenses	279	(711)	(432)
Customer account liabilities	3,023	—	3,023
Deferred revenue	1,689	2,097	3,786
Other liabilities	(356)	(30)	(386)
Net cash provided by operating activities	$78,277	$ —	$78,277

The following summarizes the significant adjustments resulting from our adoption of the new revenue recognition standard compared to what would have been recorded in our financial statements had we continued to apply the provisions of legacy GAAP:

Consolidated Balance Sheet

Adjustments to prepaid expenses and other current assets and other assets relate to costs to fulfill and costs to obtain a customer contract which are capitalized under the new revenue standard and expensed as incurred under legacy GAAP. Adjustments to deferred revenue reflect the acceleration of revenue recognition for certain transactions that required longer term revenue deferral under legacy GAAP.

Consolidated Statement of Comprehensive Loss

Adjustments to software license revenues reflect the requirement under legacy GAAP to defer recognition of revenue when vendor specific objective evidence of fair value could not be established. The new revenue standard does not have a similar requirement and instead results in the recognition of software license revenue when that performance obligation has been transferred to the customer. In addition, the new revenue standard changed the methodology for allocating the transaction price between performance obligations, which had the impact of increasing software revenue. The decrease in our deferred tax benefit under legacy GAAP is driven by the overall decrease in net income and the inability to recognize certain tax benefits.

Consolidated Statement of Cash Flows

The adoption of the new revenue standard had no impact on our total cash flows or the net cash provided by operating activities. The adjustments reflect offsetting shifts in the components of operating cash flow driven by changes to individual balance sheet accounts and the change in our net income.

Note 5—Fair Value

Fair Value of Assets and Liabilities

We measure fair value at the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the assumptions that market participants would use in pricing an asset or liability (the inputs) are based on a tiered fair value hierarchy consisting of three levels, as follows:

Level 1: Observable inputs such as quoted prices for identical assets or liabilities in active markets.

Level 2: Other inputs that are observable directly or indirectly, such as quoted prices for similar instruments in active markets or for similar markets that are not active.

Level 3: Unobservable inputs for which there is little or no market data and which require us to develop our own assumptions about how market participants would price the asset or liability.

Valuation techniques for assets and liabilities include methodologies such as the market approach, the income approach or the cost approach, and may use unobservable inputs such as projections, estimates and management's interpretation of current market data. These unobservable inputs are only utilized to the extent that observable inputs are not available or cost-effective to obtain.

At June 30, 2019 and June 30, 2018, our assets and liabilities measured at fair value on a recurring basis were as follows:

	June 30, 2019				June 30, 2018			
	Fair Value Measurements Using Input Types				Fair Value Measurements Using Input Types			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
	(in thousands)							
Assets								
Money market funds (cash and cash equivalents)	$ 2,807	$ —	$ —	$ 2,807	$ 154	$ —	$ —	$ 154
Available for sale securities—Debt								
U.S. Corporate	$ —	$ —	$ —	$ —	$ —	$ 3,467	$ —	$ 3,467
Government—U.S.	—	7,479	—	7,479	—	6,480	—	6,480
Total available for sale securities	$ —	$ 7,479	$ —	$ 7,479	$ —	$ 9,947	$ —	$ 9,947
Short-term derivative interest rate swap	$ —	$ —	$ —	$ —	$ —	$ 407	$ —	$ 407
Long-term derivative interest rate swap	$ —	$ —	$ —	$ —	$ —	$ 2,183	$ —	$ 2,183
Total assets	$ 2,807	$ 7,479	$ —	$ 10,286	$ 154	$ 12,537	$ —	$ 12,691
Liabilities								
Short-term derivative interest rate swap	$ —	$ 37	$ —	$ 37	$ —	$ —	$ —	$ —
Long-term derivative interest rate swap	$ —	$ 1,248	$ —	$ 1,248	$ —	$ —	$ —	$ —
Total liabilities	$ —	$ 1,285	$ —	$ 1,285	$ —	$ —	$ —	$ —

Fair Value of Financial Instruments

We have certain financial instruments which consist of cash and cash equivalents, cash and cash equivalents held for customers, marketable securities, accounts receivable, accounts payable, customer account liabilities, derivative interest rate swaps and debt drawn on our Credit Facility. Fair value information for each of these instruments is as follows:

- Cash and cash equivalents, cash held for customers, accounts receivable, accounts payable and customer account liabilities fair values approximate their carrying values, due to the short-term nature of these instruments.
- Marketable securities classified as held to maturity, all of which mature within one year, are recorded at amortized cost, which at June 30, 2019 and June 30, 2018, approximated fair value.
- Marketable securities classified as available for sale are recorded at fair value. Unrealized gains and losses are included as a component of other accumulated comprehensive loss in stockholders' equity, net of tax. We use the specific identification method to determine any realized gains or losses from the sale of our marketable securities classified as available for sale.
- The fair value of our derivative interest rate swaps is based on the present value of projected cash flows that will occur over the life of the instruments, after considering certain contractual terms of the arrangements and counterparty credit risk.
- The carrying value of assets related to deposits we have made to fund future requirements associated with Israeli severance arrangements was $1.2 million and $1.4 million at June 30, 2019 and June 30, 2018, respectively, which approximated their fair value.
- We have certain other investments for which there is no readily determinable fair value. The carrying value of these investments was $0.7 million and $4.4 million at June 30, 2019 and June 30, 2018, respectively, and they are reported as a component of our other assets. These investments are recorded at cost, less impairment (if any) plus or minus adjustments for observable price changes.
- We have borrowings of $110 million against our Credit Facility. The fair value of these borrowings, which are classified as Level 2, approximates their carrying value at June 30, 2019, as the instrument carries a variable rate of interest which reflects current market rates.

Note 6—Acquisitions

Fiscal Year 2019

During the fiscal year ended June 30, 2019, we completed three business acquisitions for aggregate purchase consideration of $24.5 million.

BankSight Software Systems

On June 3, 2019, we signed an agreement to acquire the outstanding capital stock of BankSight for $2.8 million in cash and 40,000 shares of our common stock which has vesting conditions tied to the continued employment of a certain stockholder of BankSight and thus excluded from the purchase price allocation. Prior to the acquisition, we had a pre-existing relationship with BankSight in the form of a minority investment in their preferred stock of BankSight in the amount of $3.5 million. The carrying value of our prior investment approximated its fair value at the time of our acquisition and the total fair value we paid to acquire the outstanding capital stock of BankSight, $6.3 million, was allocated to assets acquired and liabilities assumed. BankSight is an early-stage technology company that develops and markets a SaaS-based customer engagement and growth platform for banks and credit unions.

In the preliminary allocation of the purchase price, we recorded $3.6 million of goodwill. The goodwill is not deductible for income tax purposes and arose principally due to the anticipated future benefits arising from the acquisition. Identifiable intangible assets of $3.7 million, consisting primarily of technology related assets, are being amortized over a weighted average estimated useful life of five years.

At June 30, 2019 the allocation of the purchase price is preliminary as we were still obtaining fair value estimates for assets acquired, particularly intangible assets. We expect that the allocation of intangible assets between goodwill and finite lived intangible assets will change, as may the estimated useful life assigned to finite lived assets. BankSight's operating results are included in our Banking Solutions segment from the date of the acquisition forward and did not have a material impact on our revenue or net income (loss).

The following unaudited pro forma financial information presents the combined results of operations of Bottomline and BankSight, as if the acquisition had occurred on July 1, 2017 and July 1, 2018. The pro forma financial information for all periods presented includes the accounting effects resulting from certain adjustments such as an increase in amortization expense as a result of acquired intangible assets, an increase in share based payment expense related to compensatory awards of restricted stock issued as part of the acquisition and to BankSight employees who were hired by us, and a decrease in interest income as a result of the cash paid for the acquisition. This pro forma information does not necessarily reflect the results of operations that would have actually occurred had we and BankSight been a single entity during these periods. Further, at June 30, 2019 our allocation of the purchase price of BankSight was preliminary as we were still obtaining information about the fair value of assets acquired, including intangible assets. Accordingly, the pro forma presentation is based on estimates that we believe are reasonable but that are likely to change as the purchase price allocation is finalized.

	Twelve Months Ended June 30,	
	2019	2018
	Unaudited (in thousands)	
Revenues	$ 422,761	$ 394,847
Net income	$ 7,114	$ 6,515
Basic net income per share	$ 0.18	$ 0.17
Diluted net income per share	$ 0.17	$ 0.17

Experian Limited

On March 6, 2019, we acquired certain technology and customer related assets from Experian Limited (Experian) for 9.5 million British Pound Sterling (approximately $12.6 million based on the exchange rate in effect at the acquisition date). These assets will complement our existing UK payment products.

In the preliminary allocation of the purchase price, we recorded $1.7 million of goodwill. The goodwill is not deductible for income tax purposes and arose principally due to the anticipated future benefits arising from the acquisition. Identifiable intangible assets of $12.8 million, consisting primarily of customer related assets, are being amortized over a weighted average estimated useful lives of eleven years. Experian's operating results are included in our Payments and Transactional Documents segment from the date of the acquisition forward and did not have a material impact on our revenue or net income (loss).

On May 17, 2019 we were notified by the UK's Competition and Markets Authority (CMA) that it was reviewing our acquisition of these assets from Experian to assess whether the acquisition could result in a substantial lessening of competition. We have since been in an iterative process with the CMA, answering questions about the nature of assets acquired and the overall markets in which the assets will be deployed. The CMA review process can consist of two phases with multiple steps. We are in the first phase which is scheduled to conclude in October 2019.

There is a range of possible outcomes to the CMA's review, from clearance of the acquisition to, in a worst-case, divestiture of the acquired asset set; with a range of options in between. While we cannot with certainty predict the outcome of this process, we do not believe that the ultimate outcome will have a material effect on our operating results, financial position or cash flows.

Microgen Banking Systems Limited

On July 2, 2018, we acquired Microgen Banking Systems Limited (Microgen), a UK-based BACS payment company, for 6.9 million British Pound Sterling (approximately $9.1 million based on the exchange rate in effect at the acquisition date). Microgen provides BACS payment products and supporting services to a wide range of UK-based customers and is expected to expand our customer base.

In the allocation of the purchase price, we recorded $2.7 million of goodwill. The goodwill is not deductible for income tax purposes and arose principally due to the anticipated future benefits arising from the acquisition. Identifiable intangible assets of $8.4 million, consisting primarily of customer related assets, are being amortized over a weighted average estimated useful life of thirteen years. Microgen's operating results are included in our Payments and Transactional Documents segment from the date of the acquisition forward and did not have a material impact on our revenue or net income (loss).

Acquisition expenses of approximately $3.0 million were recognized during the fiscal year ended June 30, 2019 related to the BankSight, Experian and Microgen acquisitions, principally as a component of general and administrative expense.

Fiscal Year 2018

During the fiscal year ended June 30, 2018, we completed two business acquisitions for aggregate purchase consideration of $18.5 million.

First Capital Cashflow Ltd.

On October 4, 2017, we acquired First Capital Cashflow Ltd. (FCC) for 10.5 million British Pound Sterling (approximately $13.9 million based on the exchange rate in effect at the acquisition date) in cash and 42,080 shares of our common stock. The shares, which were issued to the selling stockholders of FCC who became employees of Bottomline, have vesting conditions tied to continued employment; as such the shares are compensatory and we will record share-based payment expense over the underlying stock vesting period of five years. FCC's operating results are included in our Payments and Transactional Documents segment from the date of the acquisition forward and did not have a material impact on our revenue or net income (loss).

Decillion

On August 14, 2017, we acquired Singapore-based Decillion Group (Decillion) for total consideration of 6.2 million Singapore Dollars (approximately $4.6 million based on the exchange rate in effect at the acquisition date), consisting of $2.8 million in cash and a note payable of $1.8 million. The note is payable in equal installments over ten quarters starting during the three months ended September 30, 2017. Decillion's operating results have been included in our Cloud Solutions segment from the date of the acquisition forward and did not have a material impact on our revenue or net income (loss).

Note 7—Property and Equipment

Property and equipment consisted of the following:

	June 30, 2019	June 30, 2018
	(in thousands)	
Land	$ 859	$ 250
Building and improvements	43,424	18,218
Furniture and fixtures	7,586	7,026
Technical equipment	50,395	45,756
Motor vehicles	30	30
Total property and equipment, gross	102,294	71,280
Less: Accumulated depreciation	47,753	42,385
Total property and equipment, net	$ 54,541	$ 28,895

EMEA Headquarters

In January 2019, we purchased a building in Reading, UK for a base purchase price of 16.0 million British Pound Sterling (approximately $20.7 million based on the exchange rate in effect at the acquisition date), funded with existing cash on hand. When it is ready for its intended use, the building will ultimately replace our current Reading, UK building as our European headquarters.

Note 8—Goodwill and Other Intangible Assets

Goodwill and acquired intangible assets are initially recorded at fair value and tested periodically for impairment. We perform an impairment test of goodwill during the fourth quarter of each fiscal year or sooner, if indicators of potential impairment arise.

We performed our annual goodwill impairment test during the fourth quarter of fiscal years 2019 and 2018. Based on these reviews, we concluded that there was no goodwill impairment.

There can be no assurance that there will not be impairment charges in future periods as a result of future impairment reviews. To the extent that future impairment charges occur it would likely have a material impact on our financial results. At June 30, 2019, the carrying value of goodwill for all of our reporting units was $206.1 million.

The following tables set forth the information for intangible assets subject to amortization and for intangible assets not subject to amortization.

	As of June 30, 2019			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Weighted Average Remaining Life
		(in thousands)		(in years)
Amortized intangible assets:				
Customer related	$ 219,893	$ (145,144)	$ 74,749	8.5
Core technology	130,226	(90,017)	40,209	7.4
Other intangible assets	25,712	(19,030)	6,682	5.0
Capitalized software development costs	23,213	(10,006)	13,207	3.0
Software [(1)]	72,018	(38,516)	33,502	4.2
Total	$ 471,062	$ (302,713)	$ 168,349	
Unamortized intangible assets:				
Goodwill			206,101	
Total intangible assets			$ 374,450	

	As of June 30, 2018			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Weighted Average Remaining Life
		(in thousands)		(in years)
Amortized intangible assets:				
Customer related	$ 201,214	$ (134,133)	$ 67,081	8.4
Core technology	130,257	(82,815)	47,442	8.1
Other intangible assets	21,983	(17,299)	4,684	5.3
Capitalized software development costs	19,527	(6,265)	13,262	4.0
Software [(1)]	62,711	(33,395)	29,316	4.6
Total	$ 435,692	$ (273,907)	$ 161,785	
Unamortized intangible assets:				
Goodwill			200,024	
Total intangible assets			$ 361,809	

(1) Software includes purchased software and software developed for internal use.

Estimated amortization expense for fiscal year 2020 and subsequent fiscal years for acquired intangible assets, capitalized software development costs and software, in each case that have been placed in service as of June 30, 2019, is as follows:

	Acquired Intangible Assets	Capitalized Software Development Costs	Software
		(in thousands)	
2020	$ 20,452	$ 3,771	$ 9,232
2021	19,167	3,771	6,790
2022	17,307	3,771	5,106
2023	15,991	927	3,242
2024	14,268	299	1,837
2025 and thereafter	34,455	—	1,511

Each period, for capitalized software development costs, we evaluate whether amortization expense using a ratio of revenue in the period to total expected revenue over the product's expected useful life would result in greater amortization than as calculated under a straight-line methodology and, if that were to occur, amortization in that period would be accelerated accordingly.

The following table represents a rollforward of our goodwill balances, by reportable segment:

	Cloud Solutions	Banking Solutions	Payments and Transactional Documents	Other	Total
			(in thousands)		
Balance at June 30, 2017 [(1)]	$ 90,069	$ 35,880	$ 60,557	$ 8,194	$ 194,700
Goodwill acquired during the period	1,326	—	4,825	—	6,151
Impact of foreign currency translation	(1,125)	—	298	—	(827)
Balance at June 30, 2018 [(1)]	$ 90,270	$ 35,880	$ 65,680	$ 8,194	$ 200,024
Goodwill acquired during the period	—	3,571	4,391	—	7,962
Impact of foreign currency translation	37	—	(1,922)	—	(1,885)
Balance at June 30, 2019 [(1)]	$ 90,307	$ 39,451	$ 68,149	$ 8,194	$ 206,101

(1) Other goodwill balance is net of $7.5 million accumulated impairment losses.

Note 9—Accrued Expenses

Accrued expenses consisted of the following:

	June 30, 2019	June 30, 2018
	(in thousands)	
Employee compensation and benefits	$ 15,810	$ 19,535
Accrued customer rebates	4,605	3,677
Professional fees	3,106	2,182
Sales and value added taxes	1,971	1,983
Accrued income taxes payable	1,162	563
Accrued royalties	421	332
Accrued interest	197	2
Other	6,673	6,720
Total accrued expenses	$ 33,945	$ 34,994

Note 10—Commitments and Contingencies

Leases

We lease our principal office facility in Portsmouth, NH under a non-cancelable operating lease expiring in 2027. In addition, we have two five-year options to further extend the term of this lease. Rent expense is fixed for the base term of the lease. We are also required to pay certain incremental operating costs above the base rent.

We lease office space in certain other cities worldwide under operating leases that expire at various dates. In addition to the base rent, we are typically also responsible for a portion of the operating expenses associated with these facilities. Where operating leases contain rent escalation clauses or certain types of landlord concessions, the estimated financial effect of these items are included in the determination of the straight-line expense over the lease term.

Rent expense, net of sublease income, for the fiscal years ended June 30, 2019, 2018 and 2017 was $6.3 million, $6.5 million and $6.7 million, respectively. Sublease income for the fiscal years ended June 30, 2019, 2018 and 2017 was insignificant.

Future minimum annual rental commitments under our facilities, equipment and vehicle leases at June 30, 2019 are as follows:

	(in thousands)
2020	$ 5,612
2021	5,672
2022	4,967
2023	3,690
2024	2,913
2025 and thereafter	11,665
	$ 34,519

Long Term Service Arrangements

We have entered into service agreements with initial minimum commitments ranging between one and six years that expire between the fiscal years 2020 and 2024, primarily for software licenses, hosting services and disaster recovery services. In addition to the base terms, we have certain options to extend the terms of the service agreements. Payments are fixed for the initial terms and are subject to increase in the event that we elect to extend the service.

Future minimum annual commitments under our long term service arrangements as of June 30, 2019 are as follows:

	(in thousands)
2020	$ 9,112
2021	4,788
2022	1,277
2023	280
2024	56
	$ 15,513

Legal Matters

We are, from time to time, a party to legal proceedings and claims that arise out of the ordinary course of our business. We are not currently a party to any material legal proceedings.

Note 11—Indebtedness

Credit Agreement

We are party to a credit agreement with Bank of America, N.A. and certain other lenders (the Credit Agreement) that provides for a revolving credit facility in the amount of up to $300 million (the Credit Facility) and that expires in July 2023. We also have the right to request an increase of the aggregate commitments under the Credit Facility by up to $150 million, subject to specified conditions. At June 30, 2019, we owed $110 million under the Credit Facility.

The proceeds of the Credit Facility may be used for lawful corporate purposes of Bottomline and its subsidiaries, including acquisitions, share buybacks, capital expenditures, the repayment or refinancing of indebtedness and general corporate purposes. The Credit Facility is available for the issuance of up to $20 million of letters of credit and up to $20 million of swing line loans.

The Credit Agreement contains customary representations, warranties and covenants, including, but not limited to, material adverse events, specified restrictions on indebtedness, liens, investments, acquisitions, sales of assets, dividends and other restricted payments, and transactions with affiliates. We are required to comply with (a) a maximum consolidated net leverage ratio of 3.75 to 1.00, stepping down to 3.50 to 1.00 for the quarter ending June 30, 2020; and (b) a minimum consolidated interest coverage ratio of 3.00 to 1.00. The Credit Agreement also contains customary events of default and related cure provisions. As of June 30, 2019, we were in compliance with all covenants.

The Credit Agreement is guaranteed by the Guarantors and is secured by substantially all of our domestic assets and those of the Guarantors, including a pledge of all of the shares of capital stock of the Guarantors and 65% of the shares of the capital stock of our first-tier foreign subsidiaries or those of any Guarantor, in each case subject to certain exceptions as set forth in the Credit Agreement. The collateral does not include, among other things, any real property or the capital stock or any assets of any unrestricted subsidiary.

Warrants

In December 2012, we received aggregate proceeds of $25.8 million, net of issue costs, from the sale of warrants for the purchase of up to 6.3 million shares of our common stock at a strike price of $40.04 per share (the Warrants). The Warrants were exercisable in equal tranches over a period of 150 days beginning on

March 1, 2018 and ending on October 2, 2018. Each warrant was exercisable into one share of our common stock. During the fiscal year ended June 30, 2019, we issued approximately 932 thousand shares of common stock related to the warrants exercised by the holders and all warrant exercises were net settled. There were no warrants outstanding as of June 30, 2019.

Note Payable

We financed a portion of the purchase price for our acquisition of Decillion by entering into a note payable for 2.5 million Singapore Dollars (approximately $1.8 million based on the exchange rate in effect at the acquisition date). The note is payable in equal installments over ten quarters, with the final installment due in the quarter ended December 31, 2019.

Note 12—Derivative Instruments

Cash Flow Hedges

Interest Rate Swap Agreements

We utilize interest rate swap agreements to hedge our exposure to interest rate risk. At June 30, 2019, we had two outstanding interest rate swap agreements with notional values of $100 million and $80 million, respectively.

The notional value of each interest rate swap agreement is expected to match the corresponding principal amount of a portion of our borrowings under the Credit Facility.

The $100 million notional value agreement is effective as of December 1, 2017 and expires on December 1, 2021. During this period, we have a fixed interest rate of 1.9275 percent on the notional amount and Citizens Bank, National Association, as counterparty to the agreement, will pay us interest at a floating rate based on the 1 month USD-LIBOR-BBA swap rate on the notional amount. Interest payments are made quarterly on a net settlement basis.

The $80 million notional value agreement is effective as of December 1, 2021 and expires on July 16, 2023. During this period, we have a fixed interest rate of 2.125 percent on the notional amount and Bank of America, N.A., as counterparty to the agreement, will pay us interest at a floating rate based on the 1-month USD-LIBOR-BBA swap rate on the notional amount. Interest payments will be made monthly on a net settlement basis.

We designated the interest rate swaps as hedging instruments and they qualified for hedge accounting upon inception and at June 30, 2019. To continue to qualify for hedge accounting, the instruments must retain a “highly effective” ability to hedge interest rate risk for borrowings under the Credit Facility. We are required to test hedge effectiveness at the end of each financial reporting period. If a derivative qualifies for hedge accounting, changes in fair value of the hedge instrument are recognized in accumulated other comprehensive income (loss) and subsequently reclassified into earnings in the period that the hedged transaction affects earnings. The reclassification into earnings is recorded as a component of our interest expense within other expense, net. If the instrument were to lose some or all of its hedge effectiveness, changes in fair value for the “ineffective” portion of the instrument would be recorded immediately in earnings.

The fair values of the interest rate swaps and their respective locations in our consolidated balance sheets at June 30, 2019 and June 30, 2018 were as follows:

Description	Balance Sheet Location	June 30, 2019	June 30, 2018
		(in thousands)	
Derivative interest rate swaps			
Short-term derivative asset	Prepaid expenses and other current assets	$ —	$ 407
Long-term derivative asset	Other assets	$ —	$ 2,183
Short-term derivative liability	Accrued expenses and other current liabilities	$ 37	$ —
Long-term derivative liability	Other liabilities	$ 1,248	$ —

The following table presents the effect of the derivative interest rate swaps in our consolidated statement of comprehensive income (loss) for the fiscal years ended June 30, 2019 and June 30, 2018.

	Gain (Loss) in AOCI June 30, 2018	Amount of Gain (Loss) Recognized in OCI on Derivative Instruments (Effective Portion)	Amount of (Gain) Loss Reclassified from AOCI into Net Loss (Effective Portion) [(1)]	Income Tax Benefit (Provision) in OCI on Derivative Instruments	Gain (Loss) in AOCI June 30, 2019
			(in thousands)		
Derivative interest rate swaps	$ 2,590	$ (3,455)	$ (420)	$ —	$ (1,285)

	Gain (Loss) in AOCI June 30, 2017	Amount of Gain (Loss) Recognized in OCI on Derivative Instruments (Effective Portion)	Amount of (Gain) Loss Reclassified from AOCI into Net Loss (Effective Portion) [(1)]	Income Tax Benefit (Provision) in OCI on Derivative Instruments	Gain (Loss) in AOCI June 30, 2018
			(in thousands)		
Derivative interest rate swaps	$ —	$ 2,458	$ 132	$ —	$ 2,590

(1) Recorded as interest income (expense) within other expense, net in our consolidated statements of comprehensive income (loss).

During the twelve months ended June 30, 2019, we concluded that no portion of the hedges was ineffective.

We expect to reclassify approximately $0.1 million of this unrealized loss from accumulated other comprehensive loss to earnings over the next twelve months.

Note 13—Postretirement and Other Employee Benefits

Defined Contribution Pension Plans

We have a 401(k) Plan (the Plan), whereby eligible U.S. employees may contribute up to 60% of their eligible compensation, subject to limitations established by the Internal Revenue Code. We may contribute a discretionary matching contribution annually equal to 50% of each such participant’s contribution to the Plan up to the first 5% of their annual eligible compensation. We charged approximately $2.4 million, $2.2 million and $2.1 million to expense in the fiscal years ended June 30, 2019, 2018 and 2017, respectively, associated with our matching contribution for those years.

We have a Group Personal Pension Plan (GPPP) for employees in the UK, whereby eligible employees may contribute a portion of their compensation, subject to their age and other limitations established by HM Revenue & Customs. We contribute 4% of the employee’s annual compensation as long as the individual contributes a minimum of 1% of their annual compensation to the GPPP. We charged approximately $2.0 million, $1.8 million and $1.3 million to expense in the fiscal years ended June 30, 2019, 2018 and 2017, respectively, under the GPPP.

We have a GPPP related to European employees from our acquisition of Sterci and governed by local regulatory requirements. We contributed approximately $1.7 million, $1.5 million and $1.4 million in the fiscal years ended June 30, 2019, 2018 and 2017, respectively, under the GPPP.

We have a retirement contribution plan with respect to our employees in Israel (Israel plan) under which we contribute 6.5% of each eligible employee’s annual compensation. Employees are entitled to amounts accumulated in the Israel plan upon reaching retirement age. We charged approximately $0.5 million, $0.4 million and $0.4 million to expense in the fiscal years ended June 30, 2019, 2018 and 2017, respectively, related to the Israel plan.

Defined Benefit Pension Plan

We sponsor a defined benefit pension plan for our Swiss-based employees (the Swiss pension plan) that is governed by local regulatory requirements. As of June 30, 2019, we had 131 employees, which is approximately 7% of our workforce, covered under this plan. The Swiss pension plan is governed by the Swiss Federal Law on Occupational Retirements, Survivors' and Disability Pension plans. We use a third party pension fund, Profond, to administer this plan. We charged approximately \$2.1 million, \$1.8 million and \$2.8 million to expense in the fiscal years ended June 30, 2019, 2018 and 2017, respectively, related to this plan. The annual measurement date for our pension benefits is June 30.

During the fiscal year ended June 30, 2019, we made lump sum pension payments exceeding the settlement accounting threshold related to our Swiss pension plan. As required under pension accounting rules, we recorded \$0.6 million of unrecognized actuarial loss in other expense in our consolidated statements of comprehensive income (loss) and decreased accumulated other comprehensive loss by \$0.6 million in our consolidated balance sheet for the fiscal year ended June 30, 2019.

During fiscal years ended June 30, 2014 and June 30, 2018, Profond decreased the pension benefit conversion rates over two respective five year periods, from a maximum of 7.2% to 6.8% in fiscal year 2014 and from a maximum of 6.8% to 6.2% in fiscal year 2018 (2018 plan amendment). The changes in conversion rates reduced the projected benefits at retirement for all employees and qualified as plan amendments. The prior service credits arising from the amendments were recorded as components of accumulated other comprehensive income (loss) for the fiscal years ended June 30, 2014 and June 30, 2018. For the fiscal year ended June 30, 2018, we decreased accumulated other comprehensive loss by \$2.4 million as a result of the 2018 plan amendment.

The accumulated benefit obligation (ABO) represents the obligations of a pension plan for past service as of the measurement date, which is the present value of benefits earned to date based on current compensation levels. The Swiss pension plan ABO as of June 30, 2019 was $52.7 million. The projected benefit obligation (PBO) is the ABO adjusted to reflect the impact of future compensation levels. The following table represents the PBO, change in plan assets, funded status and amounts recognized in our consolidated balance sheets at June 30, 2019 and 2018:

	June 30,	
	2019	2018
	(in thousands)	
Change in benefit obligation:		
Projected benefit obligation at beginning of year	$ 51,368	$ 51,904
Service cost	2,532	2,539
Interest cost	456	353
Actuarial loss	4,124	684
Plan participant contributions	880	839
Benefits paid, net of transfers into plan	(215)	(664)
Plan change	—	(2,440)
Settlement	(3,060)	—
Effect of foreign currency exchange rate changes	823	(1,847)
Projected benefit obligation at end of year	$ 56,908	$ 51,368
Change in plan assets:		
Fair value of plan assets at beginning of year	$ 36,929	$ 35,688
Actual return on plan assets	339	536
Employer contribution	1,870	1,799
Plan participant contributions	880	839
Benefits paid, net of transfers into plan	(215)	(664)
Settlement	(3,060)	—
Effect of foreign currency exchange rate changes	563	(1,269)
Fair value of plan assets at end of year	$ 37,306	$ 36,929
Pension liability at end of fiscal year	$ (19,602)	$ (14,439)
Accumulated other comprehensive loss consists of the following:		
Net prior service credit	$ 2,877	$ 3,140
Net actuarial loss	(11,586)	(7,105)
Accumulated other comprehensive loss, before income tax	$ (8,709)	$ (3,965)

For the fiscal year ended June 30, 2019, we reclassified approximately $0.8 million of net actuarial loss and $0.3 million of net prior service credit as components of net periodic benefit cost from accumulated other comprehensive loss. For the fiscal year ending June 30, 2020, we expect to reclassify approximately $0.5 million of net actuarial loss and $0.3 million of net prior service credit as components of net periodic benefit cost from accumulated other comprehensive loss.

The net unfunded balance of our defined benefit pension plan is recorded as a non-current liability and all unrecognized gains or losses, net of tax, are recorded as a component of other comprehensive loss within stockholders' equity at June 30, 2019.

Assumptions:

	Fiscal Year Ended June 30,		
	2019	2018	2017
Weighted-average assumptions used to determine net benefit costs:			
Discount rate	0.90%	0.70%	0.25%
Expected return on plan assets	3.75%	3.50%	3.00%
Rate of compensation increase	1.75%	1.50%	1.50%
Weighted-average assumptions used to determine benefit obligations at year end:			
Discount rate	0.40%	0.90%	0.70%
Expected return on plan assets	3.25%	3.75%	3.50%
Rate of compensation increase	1.75%	1.75%	1.50%

The expected return on plan assets is determined by adjusting the market value of assets to reflect the investment gains and losses from prior years. We amortize gains and losses in our net periodic benefit cost which result from actual experience different from that assumed and from changes in assumptions. If, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation and the market related value of plan assets, the amortization is that excess divided by the average remaining service period of participating employees expected to receive benefits under the plan.

The fair value of plan assets for the Swiss pension plan was $37.3 million at June 30, 2019. As is customary with Swiss pension plans, the plan assets are invested in a collective fund with multiple employers through a Swiss insurance company. We do not have rights to the individual assets of the plan nor do we have investment authority over the assets of the plan. The collective fund maintains a variety of investment positions primarily in equity securities and highly rated debt securities. The valuation of the collective fund assets as a whole is a Level 3 measurement; however the individual investments of the fund are generally Level 1 (equity securities), Level 2 (fixed income) and Level 3 (real estate) investments. We determine the fair value of the plan assets based on information provided by the collective fund, through review of the collective fund's annual financial statements, and we further consider whether there are other indicators that the investment balances reported by the fund could be impaired. We concluded that no such impairment indicators were present at June 30, 2019.

The Swiss pension plan's actual asset allocation as compared to Profond's target asset allocations for fiscal year 2019 were as follows:

	Actual	Target
Asset Category:		
Cash and cash equivalents	6%	2%
Equity Securities	51%	49%
Fixed Income	12%	18%
Real Estate	27%	28%
Other	4%	3%

As of June 30, 2019, the estimated future benefit payments (inclusive of any future service) were as follows:

	(in thousands)
2020	$ 1,739
2021	2,389
2022	1,744
2023	1,929
2024	1,921
2025-2029	11,547

Net periodic pension costs for the Swiss pension plan included the following components:

	Fiscal Year Ended June 30,		
	2019	2018	2017
	(in thousands)		
Components of net periodic cost			
Service cost	$ 2,532	$ 2,539	$ 2,954
Interest cost	456	353	123
Net prior service credit	(306)	(91)	(89)
Net actuarial loss	219	217	648
Expected return on plan assets	(1,384)	(1,196)	(884)
Settlements	617	—	—
Net periodic cost	$ 2,134	$ 1,822	$ 2,752

The components of net periodic pension cost other than current service cost are presented within other expense, net in our unaudited consolidated statements of comprehensive income (loss).

We expect to make a contribution of approximately $1.8 million to our pension plan in fiscal year 2020, which is the legal funding regulation minimum for the Swiss pension plan.

Israeli Severance Pay

We provide severance payments based on the Israeli severance pay law and certain other circumstances to employees of our Israeli subsidiary.

Our liability for severance pay for service periods prior to January 12, 2015 is calculated based on the most recent employee salaries multiplied by the number of years of employment as of January 12, 2015. We make monthly deposits in insurance funds designed to fund a portion of this overall severance liability and the value of these deposits, inclusive of earnings and losses attributable to these deposits, is recorded as an asset on our consolidated balance sheet. In the event of a separation, the employee receives the balance in deposited funds with any remaining severance liability balance paid by us. As of June 30, 2019, for service periods prior to January 12, 2015, our severance liability (classified in other liabilities within our consolidated balance sheet) was $1.4 million and our severance deposit (classified as other assets within the consolidated balance sheet) was $1.2 million.

Effective January 12, 2015, our statutory severance liability is covered under the provisions of Section 14 of the Israel severance pay law (Section 14). Under Section 14 we are released from any future severance liability once we fund the statutory severance requirement via payment to an insurance fund on behalf of the employee. As a result, for severance obligations arising after January 12, 2015, we do not recognize any liability (or asset) for severance related obligations once we fund the statutory severance requirement.

Note 14—Share-Based Payments

We recognize expense for the estimated fair value of all share-based payments to employees on a straight-line basis over the awards vesting period. For the fiscal years ended June 30, 2019, 2018 and 2017, we recorded expense of approximately $41.7 million, $34.2 million and $31.9 million, respectively, in connection with our share-based payment awards. For the fiscal years ended June 30, 2019, 2018 and 2017, we recognized tax benefits of $2.4 million, $1.7 million and $1.8 million, respectively, related to the expense recorded in connection with our share-based payment awards.

Share-Based Compensation Plans

Employee Stock Purchase Plan

On November 16, 2000, we adopted the 2000 Employee Stock Purchase Plan, which was amended on November 18, 2004 and November 18, 2010, and which provides for the issuance of up to a total of 4,000,000 shares of common stock to participating employees. At the end of each designated purchase period, which occurs every six months on March 31 and September 30, employees can elect to purchase shares of our common stock with contributions of between 1% and 10% of their base pay, accumulated via payroll deductions, at an amount equal to 85% of the lower of the fair market value of the common stock on the first day of each 24 month offering period or the last day of the applicable six-month purchase period.

Our employee stock purchase plan has several complex features that make determining fair value on the grant date impracticable. Accordingly, we measure the fair value of these awards at intrinsic value (the value of our common stock less the employee purchase price) at the end of each reporting period. For the fiscal year ended June 30, 2019, we recorded compensation cost of approximately $3.6 million associated with our employee stock purchase plan. As a result of employee stock purchases in fiscal year 2019 we issued approximately 126,000 shares of our common stock. The aggregate intrinsic value of shares issued under the employee stock plan during fiscal year 2019 was $4.6 million. At June 30, 2019, based on employee withholdings and our common stock price at that date, approximately 30,000 shares of common stock, with an approximate intrinsic value of $0.2 million would have been eligible for issuance were June 30, 2019 to have been a designated stock purchase date.

Stock Incentive Plans

2009 Stock Incentive Plan

On November 19, 2009, we adopted the 2009 Stock Incentive Plan (the 2009 Plan), which provides for the issuance of stock options, stock appreciation rights, restricted stock, restricted stock units and other share-based awards. Stock option awards under this plan have a 10-year maximum contractual term and must be issued at an exercise price of not less than 100% of the fair market value of the common stock at the date of grant. The 2009 Plan is administered by the Board of Directors, which has the authority to determine to whom options and other equity awards may be granted, the period of exercise and what other restrictions, if any, should apply. Vesting for awards granted to date under the 2009 Plan is principally over four years from the date of the grant, with 25% of the award vesting after one year and 6.25% of the award vesting each quarter thereafter.

We initially reserved 2,750,000 shares of our common stock for issuance under the 2009 Plan, plus additional shares equal to the number of shares subject to outstanding awards under our prior plans which expire, terminate or are otherwise surrendered, cancelled, forfeited or repurchased by us. On November 15, 2018, we adopted an amendment to our 2009 Stock Incentive Plan to increase the number of shares of common stock authorized for issuance under the 2009 Plan by an additional 2,200,000 shares. To date under the 2009 Plan, 14,950,000 shares of common stock have been authorized for issuance.

2018 Israeli Special Purpose Stock Incentive Plan

On November 15, 2018, we adopted the 2018 Israeli Special Purpose Stock Incentive Plan (the Israeli Plan), which provides for the issuance of stock options, stock appreciation rights, restricted stock, restricted stock units and other share-based awards. Stock option awards under this plan have a 10-year maximum contractual term and must be issued at an exercise price of not less than 100% of the fair market value of the common stock at the date of grant. The Israeli Plan is administered by the Board of Directors, which has the authority to determine to whom options and other equity awards may be granted, the period of exercise and what other restrictions, if any, should apply. Vesting for awards granted to date under the Israeli Plan is principally over five years from the date of the grant, with 20% of the award vesting after one year and 5% of the award vesting each quarter thereafter.

We reserved 200,000 shares of common stock for issuance under the Israeli Plan.

Valuation and Related Activity

Stock options are valued using a Black Scholes method of valuation and the resulting fair value is recorded as compensation cost on a straight line basis over the option vesting period. There were no stock option grants during the fiscal years ended June 30, 2019, 2018 and 2017.

A summary of stock option and restricted stock activity for the fiscal year ended June 30, 2019 is as follows; in respect of shares available for grant, the shares are available for issuance by us as either a stock option or as a restricted stock award:

		Non-vested Stock		Stock Options			
	Shares Available for Grant	Number of Shares	Weighted Average Grant Date Fair Value	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
	(in thousands, except per share data)						
Awards outstanding at June 30, 2018	3,660	2,190	$ 29.19	59	$ 10.69	1.3	$ 2,321
Plan amendment	2,200						
Plan adoption	200						
Awards granted [1]	(1,640)	1,278	52.45				
Shares vested		(1,037)	28.43				
Stock options exercised		—	—	(45)	10.18		
Awards forfeited [1]	83	(65)	44.20				
Awards expired				—	—		
Awards outstanding at June 30, 2019	4,503	2,366	$ 41.72	14	$ 12.20	0.7	$ 481
Stock options exercisable at June 30, 2019				14	$ 12.20	0.7	$ 481

(1) The 2009 Plan and the Israeli Plan have fungible share pools in which restricted stock awards are counted against the plan (or replenished within the plan, in respect of award forfeitures) as 1.28 shares for each one share of common stock subject to such restricted stock award.

The total intrinsic value of stock options exercised during the fiscal years ended June 30, 2019, 2018 and 2017 was approximately $1.9 million, $1.9 million and $0.5 million, respectively. The total fair value of stock options that vested during the fiscal year ended June 30, 2017 was approximately $0.1 million. There were no stock options that vested during the fiscal years ended June 30, 2019 or 2018.

The majority of our restricted stock awards vest over a four year period as described above; however, certain restricted stock awards vest over either a two or five year period and restricted stock awards granted to our non-employee directors upon his or her election to the Board of Directors and annually thereafter vest after a one year period. Restricted stock awards are valued based on the closing price of our common stock on the date of grant, and compensation cost is recorded on a straight line basis over the share vesting period. The weighted average grant date fair value for restricted stock awards granted during the fiscal years ended June 30, 2019, 2018 and 2017 was $52.45, $32.78 and $22.28, respectively. The total fair value of restricted stock awards that vested during the fiscal years ended June 30, 2019, 2018 and 2017 was approximately $63.6 million, $37.5 million and $27.5 million, respectively. We recorded expense of approximately $38.1 million associated with our restricted stock awards for the fiscal year ended June 30, 2019. As of June 30, 2019, there was approximately $86.7 million of unrecognized compensation cost related to restricted stock awards that will be recognized as expense over a weighted average period of 1.6 years. Excluding the impact of shares issued as purchase consideration with forfeiture provisions, approximately 1.0 million shares of restricted stock awards vested during the fiscal year ended June 30, 2019.

Stock Issued in Acquisitions

Retention of key personnel in businesses we acquire is critical to us because it helps to ensure that we maximize the value of companies we acquire, which we believe is vitally important to our stockholders. Accordingly, in order to maximize the retention of key employees, we commonly attach forfeiture provisions to the shares we issue to acquire certain businesses. This has the effect of requiring key employees to stay in our employment, post-acquisition, in order to earn the full value of the stock we issue. These shares are issued as purchase consideration, but as a result of the forfeiture provisions we attach they are categorized as compensatory awards under U.S. GAAP. The forfeiture provisions on these shares typically lapse over a four or five year period.

During the fiscal year ended June 30, 2019, we issued 40,000 shares of our common stock, all of which were subject to future vesting conditions tied to continued employment, to a certain stockholder of BankSight in connection with our purchase of the outstanding equity of BankSight.

Activity associated with shares issued as purchase consideration with forfeiture provisions for the fiscal year ended June 30, 2019 is reflected in the table below. These shares were not issued out of our shareholder approved stock plans and do not represent grants or awards of shares from those plans.

	Non-vested Stock	
	Number of Shares (in thousands)	**Weighted Average Grant Date Fair Value**
Purchase consideration shares with forfeiture provisions outstanding at June 30, 2018	238	$ 24.32
Issuance of purchase consideration shares with forfeiture provisions	40	42.01
Lapse of forfeiture provisions	(147)	23.15
Shares forfeited	(32)	31.21
Purchase consideration shares with forfeiture provisions outstanding at June 30, 2019	99	$ 30.97

Note 15—Net Income (Loss) Per Share

The following table sets forth the computation of basic and diluted net income (loss) per share:

	Fiscal Year Ended June 30,		
	2019	2018	2017
	(in thousands, except per share amounts)		
Numerator—basic and diluted:			
Net income (loss)	$ 9,432	$ 9,328	$ (33,137)
Denominator:			
Shares used in computing basic net income (loss) per share attributable to common stockholders	40,612	38,227	37,842
Impact of dilutive securities	1,079	1,099	—
Shares used in computing diluted net income (loss) per share attributable to common stockholders	41,691	39,326	37,842
Basic and diluted net income (loss) per share attributable to common stockholders	$ 0.23	$ 0.24	$ (0.88)

For the fiscal year ended June 30, 2017, approximately 2.9 million shares of unvested restricted stock and stock options and warrants for up to 6.3 million shares of our common stock were excluded from the calculation of diluted earnings per share as their effect on the calculation would have been anti-dilutive. For fiscal year ended June 30, 2017, shares potentially issuable upon conversion or maturity of the 1.5% Convertible Senior Notes that matured on December 1, 2017 or upon exercise of the Warrants were excluded from our earnings per share calculations as their effect would have been anti-dilutive.

Note 16—Operations by Segments and Geographic Areas

Segment Information

Operating segments are the components of our business for which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. Our chief operating decision maker is our chief executive officer. Our operating segments are generally organized by the type of product or service offered and by geography.

Similar operating segments have been aggregated into four reportable segments as follows:

Cloud Solutions. Our Cloud Solutions segment provides customers with SaaS technology offerings that facilitate electronic payment, electronic invoicing, and spend management. Our legal spend management solutions, which enable customers to create more efficient processes for managing invoices generated by outside law firms while offering insight into important legal spend factors such as expense monitoring and outside counsel performance, are included within this segment. This segment also incorporates our settlement network solutions (financial messaging and Paymode-X). Our settlement network solutions are highly scalable, secure and cost effective and facilitate cash payment and transaction settlement between businesses, their vendors and banks. Revenue within this segment is generally recognized on a subscription or transaction basis or ratably over the contract term.

Banking Solutions. Our Banking Solutions segment provides solutions that are specifically designed for banking and financial institution customers. Our Banking Solutions products are sold predominantly on a hosted basis, with revenue recorded over time. This has the effect of contributing to recurring revenue and the revenue predictability of future periods, but results in revenue recognition over a longer period than a traditional on-premise software license transaction.

Payments and Transactional Documents. Our Payments and Transactional Documents segment supplies financial business process management software solutions, including making and collecting payments, sending and receiving invoices, and generating and storing business documents. This segment also provides a range of standard professional services and equipment and supplies that complement and enhance our core software products. When licensed for on-premise deployment, software license revenue is typically recorded upon delivery of the software and commencement of the license term. In hosted arrangements, we typically record revenue over time. Professional services revenue is normally recorded as we perform the work and software support and maintenance revenue is recorded ratably over the support period.

Other. Our Other segment consists of our healthcare and cyber fraud and risk management solutions. Our cyber fraud and risk management solutions non-invasively monitor, replay and analyze user behavior to flag and even stop suspicious activity in real time. Our healthcare solutions for patient registration, electronic signature, mobile document and payments allow healthcare organizations to improve business efficiencies, reduce costs and improve care quality. Software revenue for perpetual licenses of our cyber fraud and risk management and healthcare products is typically recorded upon delivery of the software and commencement of the license term. Professional services revenue is recorded as we perform the work and software support and maintenance revenue is recorded ratably over the support period which is normally twelve months.

Periodically a sales person in one operating segment will sell products and services that are typically sold within a different operating segment. In such cases, the transaction is generally recorded by the operating segment to which the sales person is assigned. Accordingly, segment results can include the results of transactions that have been allocated to a specific segment based on the contributing sales resources, rather than the nature of the product or service. Conversely, a transaction can be recorded by the operating segment primarily responsible for delivery to the customer, even if the sales person is assigned to a different operating segment.

Our chief operating decision maker assesses segment performance based on a variety of factors that normally include segment revenue and a segment measure of profit or loss. Each segment's measure of profit or loss is on a pre-tax basis and excludes certain items as presented in our reconciliation of the measure of total segment profit to GAAP income (loss) before income taxes that follows. There are no inter-segment sales; accordingly, the measure of segment revenue and profit or loss reflects only revenues from external customers. The costs of certain corporate level expenses, primarily general and administrative expenses, are allocated to our operating segments based on a percentage of the segment's revenues.

We do not track or assign our assets by operating segment.

Segment information for the fiscal years ended June 30, 2019, 2018 and 2017, according to the segment descriptions above, is as follows:

	Fiscal Year Ended June 30,		
	2019	2018	2017
		(in thousands)	
Segment revenue:			
Cloud Solutions (1)	$ 202,574	$ 182,290	$ 154,821
Banking Solutions	93,956	91,851	79,227
Payments and Transactional Documents	106,854	101,372	98,150
Other	18,578	18,583	17,214
Total segment revenue	$ 421,962	$ 394,096	$ 349,412
Segment measure of profit (loss):			
Cloud Solutions	$ 42,927	$ 37,862	$ 28,044
Banking Solutions	8,227	9,703	2,901
Payments and Transactional Documents	31,393	28,373	29,832
Other	(5,301)	(2,199)	(3,075)
Total measure of segment profit	$ 77,246	$ 73,739	$ 57,702

(1) Revenues from our legal spend management solutions were $76.7 million, $65.3 million and $58.6 million for the fiscal years ended June 30, 2019, 2018 and 2017, respectively. Revenues from our settlement network solutions were $125.9 million, $117.0 million and $96.2 million for the fiscal years ended June 30, 2019, 2018 and 2017, respectively.

A reconciliation of the measure of segment profit to GAAP income (loss) before income taxes is as follows:

	Fiscal Year Ended June 30,		
	2019	2018	2017
		(in thousands)	
Total measure of segment profit	$ 77,246	$ 73,739	$ 57,702
Less:			
Amortization of acquisition-related intangible assets	(21,336)	(22,076)	(24,246)
Goodwill impairment charge	—	—	(7,529)
Fixed asset charge	—	—	(2,399)
Stock-based compensation plan expense	(41,695)	(34,200)	(31,913)
Acquisition and integration-related expenses	(4,648)	(2,564)	(2,596)
Restructuring expenses	(1,881)	(1,495)	(547)
Legal settlement	—	(1,269)	—
Minimum pension liability adjustments	(264)	(24)	(1,079)
Other non-core (expense) income	(550)	150	223
Global ERP system implementation and other costs	(3,395)	(6,430)	(8,804)
Other expense, net (1)	3,417	(4,706)	(17,086)
Income (loss) before income taxes	$ 6,894	$ 1,125	$ (38,274)

(1) On July 1, 2018, we adopted an accounting standard update that changes the classification of certain pension related items. For purposes of this reconciliation of segment profit, we have presented pension related adjustments discretely, not as a component of other expense, net.

The following depreciation and other amortization expense amounts are included in the segment measure of profit:

	Fiscal Year Ended June 30, 2019	2018	2017
		(in thousands)	
Depreciation and other amortization expense:			
Cloud Solutions	$ 11,703	$ 10,444	$ 8,078
Banking Solutions	7,865	6,333	7,856
Payments and Transactional Documents	2,986	2,829	3,214
Other	357	388	380
Total depreciation and other amortization expense	$ 22,911	$ 19,994	$ 19,528

Geographic Information

We have presented geographic information about our revenues below. This presentation allocates revenue based on the point of sale, not the location of the customer. Accordingly, we derive revenues from geographic locations based on the location of the customer that would vary from the geographic areas listed here; particularly in respect of financial institution customers located in Australia for which the point of sale was the United States.

	Fiscal Year Ended June 30, 2019	2018	2017
		(in thousands)	
United States	$ 261,779	$ 242,170	$ 219,758
United Kingdom	99,746	91,489	80,421
Switzerland	38,698	39,759	34,957
Other	21,739	20,678	14,276
Total revenues from unaffiliated customers	$ 421,962	$ 394,096	$ 349,412

Long-lived assets based on geographical location, excluding deferred tax assets and intangible assets, were as follows:

	At June 30, 2019	2018
	(in thousands)	
Long-lived assets:		
United States	$ 44,357	$ 36,374
United Kingdom	32,035	5,586
Other	5,326	3,488
Total long-lived assets	$ 81,718	$ 45,448

Note 17—Income Taxes

Provision for Income Taxes

We file U.S. federal income tax returns and returns in various state, local and foreign jurisdictions. Generally, we are no longer subject to U.S. federal, state and local, or foreign income tax examinations by tax authorities for years before 2001.

Our provision for (benefit from) income taxes consisted of the following:

	Fiscal Year Ended June 30,		
	2019	2018	2017
		(in thousands)	
Current:			
Federal	$ 56	$ (673)	$ 41
State	123	20	32
Foreign	2,430	1,915	2,786
	2,609	1,262	2,859
Deferred:			
Federal	(1,724)	(7,271)	700
State	(441)	687	81
Foreign	(2,982)	(2,881)	(8,777)
	(5,147)	(9,465)	(7,996)
	$ (2,538)	$ (8,203)	$ (5,137)

Our income tax expense (benefit) included a tax benefit of $0.4 million, $0.4 million and $0.3 million in fiscal years 2019, 2018 and 2017, respectively, relating to a reduction in our unrecognized tax benefits upon the expiration of certain statutes of limitations.

Income (loss) before income taxes by geographic area is as follows:

	Fiscal Year Ended June 30,		
	2019	2018	2017
		(in thousands)	
North America	$ 9,403	$ (29)	$ (25,315)
United Kingdom	4,184	7,144	7,263
Continental Europe	2,194	6,062	86
Asia-Pacific and Middle East	(8,887)	(12,052)	(20,308)
	$ 6,894	$ 1,125	$ (38,274)

A reconciliation of the federal statutory rate to the effective income tax rate is as follows:

	Fiscal Year Ended June 30,		
	2019	2018	2017
Tax expense (benefit) at federal statutory rate	21.0%	28.1%	(35.0%)
State taxes, net of federal benefit	(11.1%)	5.5%	(4.0%)
Non-deductible executive compensation	48.4%	90.3%	2.5%
Foreign branch operations, net of foreign tax deductions	9.7%	91.2%	2.7%
Non-deductible acquisition costs	7.2%	26.0%	0.8%
Non-deductible other expenses	6.1%	39.2%	1.6%
Change in valuation allowance	3.7%	(168.9%)	30.3%
Changes in uncertain tax positions	2.0%	12.9%	2.2%
Investment impairment	—%	—%	(29.6%)
Goodwill impairment	—%	—%	6.9%
Tax rate differential on foreign earnings	(4.5%)	(50.7%)	9.3%
Changes in tax laws or rates [(1)]	(10.8%)	(738.7%)	(0.2%)
Research and development credit	(14.8%)	(33.4%)	(2.9%)
Share-based payments	(94.0%)	(33.4%)	1.2%
Other	0.3%	2.6%	0.8%
	(36.8%)	(729.3%)	(13.4%)

(1) The impact on our effective tax rate due to changes in tax laws or rates includes the revaluation of deferred tax assets, deferred tax liabilities and the corresponding change in our valuation allowance.

The decrease in our effective tax rate compared to the statutory tax rate for the fiscal year ended June 30, 2019 was due to tax benefits associated with share-based compensation and the enactment of legislation that decreased statutory tax rates in Switzerland. The decrease in our effective tax rate compared to the statutory tax rate for the fiscal year ended June 30, 2018 is principally due to the provisions of the Tax Cuts and Jobs Act, which reduced the U.S. federal income tax rate from 35% to 21%. Our blended U.S. federal income tax rate for the fiscal year ended June 30, 2018 was 28.06%. The excess of our effective tax rate over the statutory tax rate for the fiscal year ended June 30, 2017 was primarily due to the inability to benefit U.S. and Swiss losses and our inability to utilize certain foreign tax credits as a reduction to foreign income that is included in our U.S. tax return. This has the effect of taxing certain income twice, resulting in a higher overall tax rate.

Deferred Tax Assets and Liabilities

We recognize deferred tax assets and liabilities based on the differences between their financial reporting and tax basis by applying tax rates that are expected to be in effect when the differences reverse. Significant components of our deferred income taxes are as follows:

	June 30,	
	2019	2018
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 35,049	$ 37,908
Stock compensation	7,217	4,826
Research and development and other credits	7,183	6,225
Deferred revenue	6,103	4,482
Accrued pension	2,742	3,471
Various accrued expenses	2,731	3,271
Property and equipment	536	160
Unrealized loss—interest swap	349	—
Allowances and reserves	171	216
Other	272	95
Total deferred tax assets	$ 62,353	$ 60,654
Valuation allowance	(32,538)	(33,553)
Deferred tax assets, net of valuation allowance	29,815	27,101
Deferred tax liabilities:		
Acquired intangible assets	(21,875)	(22,674)
Property and equipment, inclusive of capitalized software	(12,205)	(11,361)
Unrealized gain—interest swap	—	(717)
Unremitted foreign earnings	—	(475)
Capitalized Costs	(5,805)	—
Other	(275)	(241)
Total deferred tax liabilities	(40,160)	(35,468)
Net deferred tax liabilities	$ (10,345)	$ (8,367)

Effective July 1, 2017, we adopted a new accounting standard intended to simplify certain aspects of accounting for share-based compensation arrangements, including the associated income tax consequences. Upon adoption, excess tax benefits associated with share-based compensation arrangements that previously were only recognized for financial reporting purposes when they actually reduced currently payable income taxes were recognized as deferred tax assets, net of any required valuation allowance. Accordingly, after adoption, we recognized the following:

	(in thousands)
Increase to deferred tax assets for excess tax benefits	$ 17,393
Increase to deferred tax asset valuation allowance	(17,144)
Net increase to deferred tax assets	$ 249

This net increase to our deferred tax assets was recorded as a cumulative effect adjustment, reducing the accumulated deficit in our consolidated balance sheet.

At June 30, 2019, we had U.S. net operating loss carryforwards of $107.4 million, of which $104.1 million expire at various times through fiscal year 2037 and $3.3 million have no statutory expiration date.

From a foreign tax perspective, we had Switzerland net operating losses of $1.3 million, which expire in fiscal year 2024 and other foreign net operating loss carryforwards of $27.9 million, primarily in Europe and Israel, which have no statutory expiration date.

We utilized approximately $14.3 million of net operating losses in fiscal year 2019, consisting of $2.3 million utilized in the U.S. and $12.0 million utilized in our foreign operations, predominantly in continental Europe.

We have approximately $7.2 million of research and development tax credit carryforwards available, which expire at various points through fiscal year 2039. Our operating losses and tax credit carryforwards may be subject to limitations under provisions of the Internal Revenue Code.

Valuation Allowance

We record a deferred tax asset if we believe that it is more likely than not that we will realize a future tax benefit. Ultimate realization of any deferred tax asset is dependent on our ability to generate sufficient future taxable income in the appropriate tax jurisdiction before the expiration of carryforward periods, if any. Our assessment of deferred tax asset recoverability considers many different factors including historical and projected operating results, the reversal of existing deferred tax liabilities that provide a source of future taxable income, the impact of current tax planning strategies and the availability of future tax planning strategies. We establish a valuation allowance against any deferred tax asset for which we are unable to conclude that recoverability is more likely than not. This is inherently judgmental, since we are required to assess many different factors and evaluate as much objective evidence as we can in reaching an overall conclusion. The particularly sensitive component of our evaluation is our projection of future operating results since this relies heavily on our estimates of future revenue and expense levels by tax jurisdiction.

At June 30, 2019, we had a $32.5 million valuation allowance against certain deferred tax assets given the uncertainty of recoverability of these amounts. The valuation allowance decreased by $1.1 million in fiscal year 2019 due predominantly to the recognition during the year of certain deferred tax liabilities against which we expect a portion of the deferred tax assets to be realized. The deferred tax liabilities arose as a result of fiscal 2019 business acquisitions as well as through the transition accounting for the new revenue recognition standard.

Uncertain Tax Positions

As of June 30, 2019, we had approximately $9.9 million of total gross unrecognized tax benefits, of which approximately $1.3 million represented the amount of unrecognized tax benefits that, if recognized, would favorably affect our effective income tax rate in future periods. Approximately $5.7 million of the gross unrecognized tax benefits resulted in reductions to the deferred tax asset relating to net operating losses and to the valuation allowance, and approximately $2.9 million of the gross unrecognized tax benefits resulted in a reduction to tax credit carryforwards and other deferred tax assets. We currently anticipate that our unrecognized tax benefits will decrease within the next twelve months by approximately $0.4 million, as a result of the expiration of certain statutes of limitations associated with intercompany transactions subject to tax in multiple jurisdictions.

A summary of the changes in the gross amount of unrecognized tax benefits is shown below:

	(in thousands)
Balance at July 1, 2016	$ 7,809
Additions related to current year tax positions	1,160
Additions related to prior year tax positions	13
Reductions due to lapse of statute of limitations	(335)
Foreign currency translation	9
Balance at July 1, 2017	8,656
Additions related to current year tax positions	1,041
Reductions related to prior year tax positions	(85)
Reductions due to lapse of statute of limitations	(432)
Reductions due to audit closure	(122)
Change in tax rates	(368)
Foreign currency translation	11
Balance at July 1, 2018	8,701
Additions related to current year tax positions	1,257
Additions related to prior year tax positions	56
Reductions due to lapse of statute of limitations	(377)
Change in tax rates	319
Foreign currency translation	(43)
Balance at July 1, 2019	$ 9,913

We recognize interest and penalties related to uncertain tax positions as a component of income tax expense. To the extent that the accrued interest and penalties do not ultimately become payable, the amounts accrued will be derecognized and reflected as an income tax benefit in the period that such a determination is made. Our accrued interest and penalties related to uncertain tax positions for all periods presented were not significant.

U.S. Tax Cuts and Jobs Act

The U.S. Tax Cuts and Jobs Act (the Tax Act) was signed into U.S. law on December 22, 2017 and made broad and complex changes to the U.S. tax code. This legislation contained a variety of income tax changes, including a reduction to the federal corporate income tax rate from 35% to 21%, a repeal of the corporate alternative minimum tax, a one-time transition tax on accumulated foreign earnings, a move to a territorial tax system, a limitation on the tax deductibility of interest expense and an acceleration of tax deductions for qualifying capital expenditures. In summary, as a consequence of the Tax Act:

- We did not incur any transition tax liability as we are in an accumulated deficit position with respect to our foreign subsidiaries.
- We reduced the carrying value of our net deferred tax liabilities to reflect the impact of lower future income tax rates and recognized a non-recurring income tax benefit of $3.7 million during the fiscal year ended June 30, 2018.
- We recognized a non-recurring income tax benefit for Refundable Alternative Minimum Tax in the amount of $0.7 million during the fiscal year ended June 30, 2018.
- We determined that a portion of our indefinite-lived deferred tax liabilities could be used as a source of taxable income when assessing the realizability of future indefinite-lived net operating loss

carryforwards. Accordingly, we recognized a non-recurring income tax benefit of $4.1 million through a reduction to our valuation allowance in the fiscal year ended June 30, 2018.

A provision of the Tax Act subjects a U.S. shareholder to current tax on “global intangible low-taxed income” (GILTI) of its controlled foreign corporations. We have elected to treat any tax related to GILTI as current tax expense in the period the tax is incurred.

The Tax Act also provides that the repatriation to the U.S. of foreign earnings can be done without federal tax consequence. We reassessed and changed our assertion that cumulative earnings by our UK and Switzerland subsidiaries were indefinitely reinvested. We continue to permanently reinvest the earnings, if any, of our international subsidiaries other than the UK and Switzerland and therefore we do not provide for U.S. income taxes or withholding taxes that could result from the distribution of those earnings to the U.S. parent. If any such earnings were ultimately distributed to the U.S. in the form of dividends or otherwise, or if the shares of our international subsidiaries were sold or transferred, we would likely be subject to additional U.S. state income taxes. It is not practicable to estimate the amount of unrecognized deferred U.S. taxes on these undistributed earnings.

All of our accounting calculations and financial reporting positions for consequences arising from the Tax Act were final as of December 31, 2018.

Note 18—Guarantees

We generally offer a standard warranty on our products and services, specifying that our software products will perform in accordance with published product specifications and that any professional services will conform with applicable specifications and industry standards. Further, we offer, as an element of our standard licensing arrangements, an indemnification clause that protects the licensee against liability and damages, including legal defense costs arising from claims of patent, copyright, trademark or other similar infringements by our software products. At June 30, 2019 and 2018, warranty accruals were not significant.

Certain of our arrangements with customers include clauses whereby we may be subject to penalties for failure to meet certain service level requirements; however, we have not incurred any related material penalties to date.

Note 19—Subsequent Events

On August 5, 2019, we announced that our board of directors had authorized a repurchase program of our common stock for an aggregate repurchase price of $50 million, including a commitment to repurchase at least $10 million of our common stock by September 30, 2019.

Note 20—Quarterly Financial Data (unaudited)

The following table contains selected quarterly financial data for the fiscal years ended June 30, 2019 and 2018. The quarterly earnings per share information is computed separately for each period. Therefore, the sum of the quarterly per share amounts may differ from the total year per share amounts.

	For the quarters ended							
	September 30, 2017	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018	March 31, 2019	June 30, 2019
	(in thousands, except per share data)							
Revenues	$ 91,296	$ 95,195	$ 101,136	$ 106,469	$ 102,437	$ 104,846	$ 106,438	$ 108,241
Gross profit [1]	50,737	54,020	55,341	60,556	57,307	59,865	60,725	61,346
Net income (loss) [2] [3] [4]	$ (4,241)	$ 3,088	$ (1,002)	$ 11,483	$ (918)	$ 5,969	$ 824	$ 3,557
Basic net income (loss) per share	$ (0.11)	$ 0.08	$ (0.03)	$ 0.30	$ (0.02)	$ 0.15	$ 0.02	$ 0.09
Diluted net income (loss) per share	$ (0.11)	$ 0.08	$ (0.03)	$ 0.28	$ (0.02)	$ 0.14	$ 0.02	$ 0.09
Shares used in computing basic net income (loss) per share	37,730	38,087	38,348	38,743	39,689	40,635	40,911	41,214
Shares used in computing diluted net income (loss) per share	37,730	39,344	38,348	40,316	39,689	41,739	41,625	41,813

(1) On July 1, 2018 we adopted an accounting standard update that changed the classification of certain pension related items. This accounting standard was adopted retrospectively. Accordingly, pension related benefits of approximately $0.1 million were reclassified from gross profit to other expense, net for each of the quarters ended September 30, 2017, December 31, 2017, March 31, 2018 and June 30, 2018.

(2) We recorded a discrete tax benefit of $4.4 million in the quarter ended December 31, 2017 and $3.6 million in the quarter ended June 30, 2018 as a result of the impact of the Tax Act, primarily arising from the revaluation of U.S.-based deferred tax liabilities and the release of valuation allowance on deferred tax assets.

(3) We liquidated a $3.0 million cost method investment in the quarter ended June 30, 2018. As a result of the sale, we recorded $6.1 million in other income in our consolidated statement of comprehensive income (loss).

(4) We liquidated a $0.4 million cost method investment in the quarter ended June 30, 2019. As a result of the sale, we recorded $7.3 million in other income in our consolidated statement of comprehensive income (loss).

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2019. The term disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on the evaluation of our disclosure controls and procedures as of June 30, 2019, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Annual Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's board of directors, management and other personnel, 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 and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- 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
- 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. 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.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of June 30, 2019. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013 framework).

Based on our assessment, management concluded that, as of June 30, 2019, the Company's internal control over financial reporting is effective based on those criteria.

As allowed by SEC guidance, management excluded from its assessment the operations of Experian Limited and BankSight Software Systems, Inc., which were acquired in March and June of 2019, respectively, and which represented approximately 3 percent and 1 percent of our total assets, respectively, primarily consisting of goodwill and other intangible assets which arose from the acquisitions, and less than 1 percent of our total revenues, each, as of and for the fiscal year ended June 30, 2019.

The Company's independent registered public accounting firm has issued an audit report on the Company's internal control over financial reporting, which is included within Part II, Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting that occurred during the fiscal quarter ended June 30, 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

See Information about our Executive Officers and Other Key Employees in Part I of this Annual Report on Form 10-K. We will file with the Securities and Exchange Commission a definitive Proxy Statement (the Proxy Statement) not later than 120 days after the close of the fiscal year ended June 30, 2019. The information required by this item is incorporated herein by reference to the information contained under the captions Proposal I - Election of Class III Directors, Section 16(a) Beneficial Ownership Reporting Compliance and Corporate Governance of the Proxy Statement.

We have adopted a Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. The text of our Code of Business Conduct and Ethics is posted in the Corporate Governance section of our website, www.bottomline.com. We intend to disclose on our website any amendments to, or waivers from, our Code of Business Conduct and Ethics that are required to be disclosed pursuant to the disclosure requirements of Item 5.05 of Form 8-K.

Item 11. Executive Compensation.

The information required by this item is incorporated herein by reference to the information contained under the captions Executive Compensation, Director Compensation, Leadership Development and Compensation Committee Interlocks and Insider Participation, Leadership Development and Compensation Committee Report, and Employment and Other Agreements and Potential Payments Upon Termination or Change in Control of the Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item is incorporated herein by reference to the information contained under the captions Security Ownership of Certain Beneficial Owners and Management and Equity Compensation Plan Information of the Proxy Statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is incorporated herein by reference to the information contained under the captions Employment and Other Agreements and Potential Payments Upon Termination or Change in Control, Proposal I - Election of Class III Directors, Corporate Governance and Certain Relationships and Related Transactions of the Proxy Statement.

Item 14. Principal Accountant Fees and Services.

The information required to be disclosed by this item is incorporated herein by reference to the information contained under the captions Principal Accounting Fees and Services and Pre-Approval Policies and Procedures of the Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) *Financial Statements, Financial Statement Schedule and Exhibits*

Financial statement schedules not included have been omitted because of the absence of conditions under which they are required or because the required information, where material, is shown in the financial statements or notes.

(3) Exhibits:

		Incorporated by Reference				
Exhibit Number	**Description**	**Form**	**File No.**	**Exhibit**	**Filing Date**	**Filed Herewith**
2.1	Agreement and Plan of Merger, dated as of May 3, 2019, by and among the Registrant, Engagement Acquisition Corp., BankSight Software Systems, Inc., and solely in his capacity as Company Equityholder Representative, Brian Stone	8-K	000-25259	2.1	6/6/2019	
2.2	Stock Purchase and Vesting Agreement by and between Bottomline Technologies (de), Inc. and Brian Stone	8-K	000-25259	2.2	6/6/2019	
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended.	8-K	000-25259	3.1	1/18/2013	
3.2	Amended and Restated By-Laws of the Registrant, as amended.	10-K	000-25259	3.2	9/12/2007	
4.1	Specimen Certificate for Shares of Common Stock.	S-1	333-67309	4.1	1/7/1999	
4.2	Warrant dated September 14, 2009 issued by the Registrant to Bank of America, N.A.	10-Q	000-25259	4.1	11/9/2009	
4.3	Registration Rights Agreement dated September 14, 2009 between the Registrant and Bank of America, N.A.	10-Q	000-25259	4.2	11/9/2009	
4.4	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934					X
10.1	Sublease dated August 31, 2000, between the Registrant and 325 Corporate Drive II, LLC.	10-K	000-25259	10.35	9/28/2000	
10.2	First Amendment to Sublease between the Registrant and 325 Corporate Drive II, LLC.	10-K	000-25259	10.52	9/30/2002	
10.3	Second Amendment to Sublease, effective as of October 1, 2001, between the Registrant and 325 Corporate Drive II, LLC.	10-Q	000-25259	10.1	11/13/2001	
10.4	Third Amendment to Sublease, effective as of June 30, 2010, between the Registrant and 325 Corporate Drive II, LLC.	10-K	000-25259	10.45	9/10/2010	
10.5	Fourth Amendment to Sublease, effective as of April 1, 2012, between the Registrant and 325 Corporate Drive II, LLC.	10-K	000-25259	10.7	8/27/2012	
10.6	Fifth Amendment to Sublease, effective as of March 12, 2014, between the Registrant and 325 Corporate Drive II, LLC.	10-K	000-25259	10.8	8/28/2014	
10.7	Legal Charge dated as of December 17, 2001 between Bottomline Technologies Europe Ltd and National Westminster Bank Plc.	10-Q	000-25259	10.4	2/14/2002	
10.8	Debenture dated as of December 17, 2001 between Bottomline Technologies Europe Ltd and National Westminster Bank Plc.	10-Q	000-25259	10.5	2/14/2002	

Exhibit Number	Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date	Filed Herewith
10.9	Credit Agreement dated as of December 9, 2016 among the Registrant; the domestic subsidiaries of the Registrant identified therein from time to time party thereto as guarantors; Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer; and the Lenders identified therein from time to time party thereto.	8-K	000-25259	10.1	12/14/2016	
10.10	First Amendment to Credit Agreement, dated as of July 16, 2018, to Credit Agreement, dated as of December 9, 2016, among the Registrant, the domestic subsidiaries of Bottomline Technologies (de), Inc. identified therein from time to time party thereto as guarantors; Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer; and the Lenders identified therein from time to time party thereto	10-Q	000-25259	10.1	11/9/2018	
10.11#	1998 Director Stock Option Plan, including form of non-statutory stock option agreement.	S-1	333-67309	10.3	11/13/1998	
10.12#	Forms of Restricted Stock Agreement under 2000 Stock Incentive Plan.	10-Q	000-25259	10.1	2/9/2006	
10.13#	2009 Stock Incentive Plan, as amended.	8-K	000-25259	99.2	11/19/2018	
10.14#	Form of Restricted Stock Agreement for UK Participants under 2009 Stock Incentive Plan.	10-Q	000-25259	10.1	5/7/2010	
10.15#	Form of Restricted Stock Agreement for Robert A. Eberle under 2009 Stock Incentive Plan.	10-Q	000-25259	10.2	5/7/2010	
10.16#	Form of Restricted Stock Agreement for US Participants under 2009 Stock Incentive Plan.	10-Q	000-25259	10.3	5/7/2010	
10.17#	Form of Stock Option Agreement for US Participants under 2009 Stock Incentive Plan.	10-Q	000-25259	10.5	5/7/2010	
10.18#	Form of Stock Option Agreement for UK Participants under 2009 Stock Incentive Plan.	10-Q	000-25259	10.6	5/7/2010	
10.19#	2000 Stock Incentive Plan, including form of stock option agreement for incentive and non-statutory stock options and form of stock option agreement for United Kingdom personnel.	10-K	000-25259	10.16	9/14/2004	
10.20#	Amended and Restated 2000 Employee Stock Purchase Plan.	8-K	000-25259	99.2	11/19/2010	
10.21#	Form of Restricted Stock Agreement for Non-Employee Directors under 2009 Stock Incentive Plan.	10-Q	000-25259	10.4	5/7/2010	
10.22#	2018 Israeli Special Purpose Stock Incentive Plan	8-K	000-25259	99.4	11/19/2018	
10.23	Form of Indemnification Letter dated as of September 21, 2000.	10-Q	000-25259	10.1	11/14/2000	
10.24#	Amended and Restated Employment Agreement dated as of November 21, 2002 between the Registrant and Joseph L. Mullen.	10-Q	000-25259	10.1	2/12/2003	
10.25#	Amended and Restated Employment Agreement dated as of November 21, 2002 between the Registrant and Robert A. Eberle.	10-Q	000-25259	10.2	2/12/2003	
10.26#	Letter Agreement dated as of September 30, 2005 between the Registrant and Joseph L. Mullen amending the Amendment and Restated Employment Agreement of Mr. Mullen dated as of November 21, 2002.	10-Q	000-25259	10.1	11/8/2005	
10.27#	Letter Agreement dated as of September 30, 2005 between the Registrant and Robert A. Eberle amending the Amendment and Restated Employment Agreement of Mr. Eberle dated as of November 21, 2002.	10-Q	000-25259	10.2	11/8/2005	
10.28#	Letter Agreement dated as of November 16, 2006 between the Registrant and Robert A. Eberle.	10-Q	000-25259	10.4	2/8/2007	
10.29#	Letter Agreement dated November 18, 2010 with Joseph L. Mullen	10-Q	000-25259	10.1	2/7/2011	
10.30#	Amendment dated November 17, 2016 to Letter Agreement dated November 18, 2010 with Joseph L. Mullen	10-Q	000-25259	10.3	2/8/2017	

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.31#	Service Agreement dated November 22, 1999 between Bottomline Technologies Limited and Nigel Savory.	10-Q/A	000-25259	10.1	11/8/2010	
10.32#	Deed of Variation to Service Agreement dated February 18, 2011 between Bottomline Technologies Limited and Nigel Savory.	10-Q	000-25259	10.1	5/6/2011	
10.33#	Letter Agreement dated as of December 23, 2008 between the Registrant and Robert A. Eberle.	10-Q	000-25259	10.2	2/6/2009	
10.34#	Employment Agreement dated October 10, 2011 between the Registrant and Norman J. Deluca	10-Q	000-25259	10.1	5/8/2015	
10.35#	Employment Agreement dated March 31, 2015 between the Registrant and Richard D. Booth.	8-K	000-25259	10.1	5/5/2015	
10.36#	Executive Retention Agreement dated as of August 5, 2016 between the Registrant and John F. Kelly	8-K	000-25259	10.1	8/5/2016	
10.37#	Form of Indemnification Agreement	8-K	000-25259	10.1	11/24/2015	
21.1	List of Subsidiaries.					X
23.1	Consent of Ernst & Young LLP.					X
31.1	Rule 13a-14(a)/15d-14(a) Certification of Principal Executive Officer.					X
31.2	Rule 13a-14(a)/15d-14(a) Certification of Principal Financial Officer.					X
32.1	Section 1350 Certification of Principal Executive Officer.					X
32.2	Section 1350 Certification of Principal Financial Officer					X
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.					
101.SCH**	Inline XBRL Taxonomy Extension Schema Document.					X
101.CAL**	Inline XBRL Taxonomy Extension Calculation Linkbase Document.					X
101.DEF**	Inline XBRL Taxonomy Extension Definition Linkbase Document.					X
101.LAB**	Inline XBRL Taxonomy Extension Label Linkbase Document.					X
101.PRE**	Inline XBRL Taxonomy Extension Presentation Linkbase Document.					X
104	Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101)					

Management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 15(b) of Form 10-K.

** Submitted electronically herewith.

Attached as Exhibit 101 to this report are the following formatted in iXBRL (Inline Extensible Business Reporting Language): (i) Consolidated Balance Sheets as of June 30, 2019 and 2018, (ii) Consolidated Statements of Comprehensive Income (Loss) for the fiscal years ended June 30, 2019, 2018 and 2017, (iii) Consolidated Statements of Stockholders' Equity for the fiscal years ended June 30, 2019, 2018 and 2017, (iv) Consolidated Statements of Cash Flows for the fiscal years ended June 30, 2019, 2018 and 2017, and (v) Notes to Consolidated Financial Statements.

SCHEDULE II-VALUATION AND QUALIFYING ACCOUNTS
ALLOWANCE FOR DOUBTFUL ACCOUNTS
Fiscal Years Ended June 30, 2019, 2018 and 2017

		Activity			
Fiscal Year Ended	**Balance at Beginning of Year**	**(Charged to Revenue, Costs and Expenses)**	**Additions and Recoveries [1]**	**Deductions [2]**	**Balance at End of Year**
			(in thousands)		
June 30, 2019	$ 996	220	1	(393)	$ 824
June 30, 2018	$ 923	238	2	(167)	$ 996
June 30, 2017	$ 982	121	—	(180)	$ 923

(1) Additions primarily represent increases to the allowance for doubtful accounts balance as a result of the impact of increases in foreign currency exchange rates.

(2) Deductions are principally write-offs as well as the impact of decreases in foreign currency exchange rates.

Item 16. Form 10-K Summary.

None.

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.

BOTTOMLINE TECHNOLOGIES (DE), INC.

Date: August 29, 2019

By: /s/ RICHARD D. BOOTH

Richard D. Booth

Chief Financial Officer and Treasurer

(Principal Financial and Accounting Officer)

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

Name	Title	Date
/s/ JOSEPH L. MULLEN **Joseph L. Mullen**	Chairman of the Board	August 29, 2019
/s/ ROBERT A. EBERLE **Robert A. Eberle**	President, Chief Executive Officer and Director (Principal Executive Officer)	August 29, 2019
/s/ RICHARD D. BOOTH **Richard D. Booth**	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	August 29, 2019
/s/ KENNETH J. D'AMATO **Kenneth J. D'Amato**	Director	August 29, 2019
/s/ PETER GIBSON **Peter Gibson**	Director	August 29, 2019
/s/ JENNIFER M. GRAY **Jennifer M. Gray**	Director	August 29, 2019
/s/ PAUL H. HOUGH **Paul H. Hough**	Director	August 29, 2019
/s/ JEFFREY C. LEATHE **Jeffrey C. Leathe**	Director	August 29, 2019
/s/ BENJAMIN E. ROBINSON III **Benjamin E. Robinson III**	Director	August 29, 2019

Bottomline Technologies Reconciliation to Core Financial Results (in thousands):

Reconciliation to Adjusted EBITDA

	2011	2012	2013	2014	2015	2016	2017	2018	2019
GAAP Net Income (Loss)	$35,893	$1,705	($14,395)	($19,104)	($34,680)	($19,648)	($33,137)	$9,328	$9,432
Adjustments:									
Other (income) expense, net	(558)	(41)	11,357	14,544	15,553	15,312	17,086	4,706	(3,417)
Taxes	(25,467)	5,596	(3,898)	2,082	18,364	785	(5,137)	(8,203)	(2,538)
Depreciation and amortization	5,140	5,724	6,861	8,250	10,507	13,489	19,528	19,994	22,911
Amortization of acquired intangible assets	12,662	15,753	19,549	26,242	30,383	28,978	24,246	22,076	21,336
Goodwill impairment charge	-	-	-	-	-	-	7,529	-	-
Stock-based compensation	11,467	13,768	18,031	22,821	27,025	30,279	31,913	34,200	41,695
Acquisition & integration related expenses	1,677	1,987	10,827	4,563	2,835	741	2,596	2,564	4,648
Global ERP system implementation costs	-	-	-	-	-	4,252	8,804	6,430	3,395
Restructuring expenses	1,111	1,609	1,179	1,371	1,297	850	547	1,495	1,881
Legal settlement	-	-	-	-	-	-	-	1,269	-
Minimum pension liability adjustments	-	-	-	331	56	203	1,079	24	264
Other non-core items	-	-	-	-	76	(246)	189	(150)	550
Adjusted EBITDA	$41,925	$46,101	$49,511	$61,100	$71,416	$74,995	$75,243	$93,733	$100,157

We have presented supplemental non-GAAP financial measures as part of our shareholder letter included in this Annual Report to Shareholders. The presentation of this non-GAAP information should not be considered in isolation from, or as a substitute for, our financial results presented in accordance with GAAP. We believe that these supplemental non-GAAP financial measures are useful to investors because they allow for an evaluation of the company with a focus on the performance of its core operations. Our executive management team uses these same non-GAAP measures internally to assess the ongoing performance of the company. Since this information is not a GAAP measurement of financial performance, there are material limitations to its usefulness on a stand-alone basis, including the lack of comparability of this presentation to the GAAP financial results of other companies.

The shareholder letter contains forward-looking statements, including, without limitation, statements reflecting our expectations about our future competitive position, revenue growth, market leadership and stockholder value. These and other statements (including but not limited to statements to the effect that we “believe” , “expect” or similar expressions) that are not statements relating to historical matters should be considered forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of numerous important factors, including, among others, competition, market demand, technological change, strategic relationships, recent acquisitions, international operations and general economic conditions and those discussed in “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended June 30, 2019, and the subsequently filed Form 10-Qs and Form 8-Ks or amendments thereto. Any forward-looking statements represent our views only as of today and should not be relied upon as representing our views as of any subsequent date. We do not assume any obligation to update any forward-looking statements.

BOARD OF DIRECTORS

Joseph L. Mullen
Chairman

Robert A. Eberle
Chief Executive Officer
Bottomline Technologies

Kenneth J. D'Amato
Director

Peter Gibson
Director

Jennifer M. Gray
Director

Paul H. Hough
Director

Jeffrey C. Leathe
Director

Benjamin E. Robinson III
Director

EXECUTIVE OFFICERS

Robert A. Eberle
Chief Executive Officer

Richard D. Booth
Chief Financial Officer & Treasurer

Norman J. DeLuca
Managing Director, Banking Solutions

John F. Kelly
General Manager, Legal Solutions

Nigel K. Savory
Managing Director, Europe

SENIOR MANAGEMENT

Paul J. Fannon
Deputy Managing Director, EMEA

Stephanie B. Lucey
Chief People Officer

John J. Mason
Chief Information Officer

Brian S. McLaughlin
Chief Experience Officer

Andrew J. Mintzer
Executive Vice President, Product Strategy and Customer Delivery

Jessica Pincomb Moran
General Manager, Paymode-X Business Solutions

Eric K. Morgan
Executive Vice President,
Global Controller

Christine M. Nurnberger
Chief Marketing Officer

David G. Sweet
Executive Vice President,
Strategy and Corporate Development

Form 10-K
A copy of our Form 10-K is available without charge upon written request to:

Bottomline Technologies (de), Inc.,
325 Corporate Drive,
Portsmouth, NH 03801
Attention: Corporate Secretary

or by telephone at (603) 436-0700

Common Stock Information
Our common stock is traded on the Nasdaq Global Select Market under the symbol “EPAY”

Independent Registered Public Accounting Firm
Ernst & Young LLP
Boston, Massachusetts

Transfer Agent
Computershare Investor Services
PO Box 505000
Louisville, KY 40233-5000
(877) 282-1168
www.computershare.com

Website
Additional company information is available at www.bottomline.com

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