

PTC®

2015 Annual Report

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

FORM 10-K

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

For the Fiscal Year Ended: September 30, 2015

Commission File Number: 0-18059

PTC Inc.

(Exact name of registrant as specified in its charter)

Massachusetts
(State or other jurisdiction of
incorporation or organization)

04-2866152
(I.R.S. Employer
Identification Number)

140 Kendrick Street, Needham, MA 02494
(Address of principal executive offices, including zip code)
(781) 370-5000

(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Common Stock, \$.01 par value per share	NASDAQ Global Select Market

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

None
(Title of Class)

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES NO

Indicate by check mark whether the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES NO

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

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

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

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

Large Accelerated Filer Accelerated Filer Non-accelerated Filer Smaller Reporting Company
(Do not check if a smaller reporting company)

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

The aggregate market value of our voting stock held by non-affiliates was approximately \$4,159,706,082 on April 4, 2015 based on the last reported sale price of our common stock on the Nasdaq Global Select Market on April 2, 2015. There were 113,933,336 shares of our common stock outstanding on that day and 114,529,462 shares of our common stock outstanding on November 20, 2015.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement in connection with the 2016 Annual Meeting of Stockholders (2016 Proxy Statement) are incorporated by reference into Part III.

Important Update Regarding Year-End Results

Our results for the year ended September 30, 2015 included in this Annual Report on Form 10-K reflect an accrual of \$28.2 million related to a previously disclosed matter in China, as described in Management's Discussion and Analysis of Financial Condition and Results of Operations *Impact of an Investigation in China*. This accrual includes \$14.6 million recorded in the fourth quarter of 2015 after we initially reported our results for the fourth quarter and fiscal year 2015 in our Earnings Release on Form 8-K on October 28, 2015. As a result, GAAP operating income and net income for the quarter and year ended September 30, 2015 are \$14.6 million lower than initially reported, and earnings per share is \$0.13 lower.

PTC Inc.
ANNUAL REPORT ON FORM 10-K FOR FISCAL YEAR 2015

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Forward-Looking Statements

Statements in this Annual Report about our anticipated financial results and growth, as well as about the development of our products and markets, are forward-looking statements that are based on our current plans and assumptions. Important information about factors that may cause our actual results to differ materially from these statements is discussed in Item 1A. "Risk Factors" and generally throughout this Annual Report.

Unless otherwise indicated, all references to a year reflect our fiscal year that ends on September 30.

PART I

ITEM 1. Business

PTC Inc. develops and delivers technology solutions, comprised of software and services, that enable our customers to transform the way they create, operate and service their products for a smart, connected world.

Our solutions and software products address the challenges our customers face in the following areas:

Computer-Aided Design (CAD)

Effective and collaborative product design across the globe.

Product Lifecycle Management (PLM)

Management of product development from concept to retirement across functional processes and distributed teams.

Application Lifecycle Management (ALM)

Management of global software development from concept to delivery.

Service Lifecycle Management (SLM)

Planning and delivery of service, and analysis of product intelligence at the point of service.

Internet of Things (IoT)

Enabling connectivity and development of software applications for smart, connected products.

Business Developments

Subscription Model

In 2015, we began offering our customers the option to purchase most of our products as a subscription, whereby a fee is paid for the right to use our software and receive support for a specified period. A small but growing percentage of our licenses are being sold as subscriptions. Transitioning a substantial portion of our business from a perpetual licensing model to a subscription model is a top priority for us in the coming year and for several years to follow.

Acquisitions

In May 2015 we acquired ColdLight Solutions, LLC. ColdLight offers solutions for data machine learning and predictive analytics, which expanded our Technology Platform business.

In November 2015, we acquired the Vuforia business from Qualcomm Connected Experiences, Inc. Vuforia is an augmented reality technology platform that adds to our Technology Platform business.

In 2014, we acquired ThingWorx (December), Atego (June) and Axeda (August).

Corporate Organizational Changes

As we expand into new technologies, our business is becoming more complex and our newer business differs in important ways from our traditional core business. The core and new businesses have different strategies and business models, and each has its own needs with respect to how to best build, market, sell, and service its products. For example, we believe that the new IoT analytics and augmented reality business is best addressed through a large developer and partner ecosystem cultivated through marketing-led approaches, whereas we believe our traditional business is best served by leveraging direct sales efforts. Given the differing go-to-market strategies and the growth opportunities we see in both our core and new businesses, we have made changes to our organizational structure that will allow us to more effectively manage these two

different but complementary business models. As of October 1, 2015, we reorganized the company into two main business units:

- the **Solutions Group** comprised of our core CAD, PLM, ALM and SLM; and
- the **Technology Platform Group** comprised of our IoT, analytics and augmented reality business.

Each of the units will be led by a group president and will have separate research and development and go-to-market resources, while the other corporate functions will support both. We believe that this new structure will allow us to optimize our focus and our balance on each of these two businesses, providing focused leadership, improved execution, and performance-oriented accountability that will enable us to leverage our assets and capabilities, with the goal of increasing growth.

Our Markets

The markets we serve present different growth opportunities for us. We see greater opportunity for market growth in our Technology Platform solutions, followed by SLM, PLM and ALM solutions. CAD, which is a more highly penetrated market, likely presents a lower growth opportunity over time.

Our Principal Products and Services

We generate revenue through the sale of software licenses, subscriptions (which include license access and support for a period of time and optional cloud services), support (which includes technical support and software updates when and if available), and services (which include consulting and implementation and training). We report revenue by line of business (license and subscription, services and support), by geographic region, and by product (CAD, Extended PLM, SLM, & IoT).

Solutions Group

CAD

Our CAD products enable users to create conceptual and detailed designs, analyze designs, perform engineering calculations and leverage the information created downstream using 2D, 3D, parametric and direct modeling. Our principal CAD products are described below.

PTC Creo® is an interoperable suite of product design software that provides a scalable set of packages for design engineers to meet a variety of specialized needs. PTC Creo provides capabilities for design flexibility, advanced assembly design, piping and cabling design, advanced surfacing, comprehensive virtual prototyping and other essential design functions.

PTC Mathcad® is software for solving, analyzing and sharing vital engineering calculations. PTC Mathcad combines the ease and familiarity of an engineering notebook with the powerful features of a dedicated engineering calculations application.

Extended PLM

Extended PLM (ePLM) includes our PLM and ALM products.

PLM: Our PLM products are designed to address common challenges that companies, particularly manufacturing companies, face over the life of the product, from concept to retirement. These software products help customers manage product configuration information through each stage of the product lifecycle, and communicate and collaborate across the entire enterprise including product development, manufacturing and the supply chain, including sourcing and procurement.

Our principal PLM products are described below.

PTC Windchill® is a suite of PLM software that offers lifecycle intelligence - from design to service. PTC Windchill offers a single repository for all product information. As such, it is designed to create a “single source of truth” for all product-related content such as CAD models, documents, technical illustrations, embedded software, calculations and requirement specifications for all phases of the product lifecycle to help companies streamline enterprise-wide communication and make informed decisions.

Additionally, our PTC Windchill product family includes supply chain management (SCM) solutions that allow manufacturers, distributors and retailers to collaborate across product development, and the supply chain, including sourcing and procurement, to identify an optimal set of parts, materials and suppliers. This functionality provides

automated cost modeling and visibility into supply chain risk information to balance cost and quality, and enables customers to design products that meet compliance requirements and performance targets.

PTC Creo® View™ enables enterprise-wide visualization, verification, annotation and automated comparison of a wide variety of product development data formats, including CAD (2D and 3D), ECAD, and documents. PTC Creo View provides access to designs and related data without requiring the original authoring tool.

ALM: Our ALM products are designed for discrete manufacturers where coordination and collaboration between software and hardware teams is critical to understand product release readiness, support variant complexity, automate development processes, ensure complete lifecycle traceability and manage change.

Our principal ALM product suite is PTC Integrity™ which includes solutions added with our acquisition of the Atego business.

PTC Integrity enables users to manage system models, software configurations, test plans and defects. With PTC Integrity, engineering teams can improve productivity and quality, streamline compliance, and gain greater product visibility, ultimately enabling them to bring more innovative products to market.

Our Model-Based Systems Engineering (MBSE) solution connects requirements engineering, architecture modeling, physical product definition, and system verification functions. Our solution allows multi-functional teams to work in concert while modeling the interdependencies of mechanical, electrical, and software engineering components. In doing so, it enables customers to drive efficiencies and process standardization and allows distributed teams to collaboratively build digital models of complex systems, while managing system variability and enabling reuse.

SLM

Our SLM products help manufacturers and their service providers improve service efficiency and quality. These include capabilities to support product service and maintenance requirements, service information delivery, service parts planning and optimization, service knowledge management, and service analytics. Our principal SLM products are described below.

PTC Servigistics® is a suite of SLM software products that integrate service planning, delivery and analysis to optimize service outcomes. PTC Servigistics products enable a systematic approach to service lifecycle management by providing a single view of service throughout the service network enabling customers to continuously improve their products and services and increase customer satisfaction.

PTC Arbortext® is an enterprise software suite that allows manufacturers to create, illustrate, manage and publish technical and service parts information to improve the operation, maintenance, service and upgrade of equipment throughout its lifecycle. These products are available in stand-alone configurations as well as integrated with PTC Windchill Service Information Manager and PTC Creo Illustrate to deliver dynamic, product-centric service and parts information.

Technology Platform Group

Our IoT products allow manufacturers and their service providers to enable connectivity and optimize data intelligence. With our acquisitions of ThingWorx, Axeda, ColdLight and Vuforia, we have expanded our solutions to support the development of applications to gather, analyze and visualize product data, which in turn helps our customers design, operate and service smart, connected products.

Our principal IoT products are described below.

ThingWorx® is a technology platform that enables users to create and deploy applications and solutions for today's smart, connected world, enabling customers to transform their products and services, innovate, and unlock new business models. ThingWorx allows customers to reduce the time, cost, and risk required to connect, manage, and develop innovative applications for smart, connected products such as predictive maintenance, system monitoring, and usage-based product design requirements. Our ThingWorx solutions include tools added through our acquisition of Axeda, including cloud-based tools that allow customers to easily and more securely connect products and devices to the cloud, and intelligently process, transform, organize and store product and sensor data.

ThingWorx Machine Learning™ is a predictive intelligence tool that uses artificial intelligence technology to simplify and automate the processes of creating and operationalizing predictions inside ThingWorx-powered solutions and other systems of record. ThingWorx Machine Learning complements our IoT portfolio by introducing data analytics to information collected from smart, connected products.

Vuforia™ is an augmented reality technology platform that enables applications to see things in the real world and then interact with them. Using computer vision technologies, and building them for mobile platforms, the technology is accessible through an application programming interface and developer workflows.

PTC Global Support

We offer global support plans for our software products. Participating customers receive updates that we make generally available to our support customers and also have direct access to our global technical support team of certified engineers for issue resolution. We also provide self-service support tools that allow our customers access to extensive technical support information. When products are purchased as a subscription, support is included as part of the subscription.

PTC Global Services

We offer consulting, implementation, training and cloud services through our Global Services Organization, with approximately 1,200 professionals worldwide, as well as through third-party resellers and other strategic partners. Our services create value by helping customers improve product development performance through technology enabled process improvement and multiple deployment paths. Our cloud services customers receive hosting and 24/7 application management.

Geographic and Segment Information

In 2015, 2014 and 2013, we had two reportable segments: Software Products, which included license and subscription and related support revenue for all our products except computer-based training products, and Services, which included consulting, implementation, training, cloud services and license and support revenue for computer-based training products. Financial information about our segments and international and domestic operations may be found in Note N *Segment Information* of “Notes to Consolidated Financial Statements” in this Annual Report, which information is incorporated herein by reference.

Research and Development

We invest heavily in research and development to improve the quality and expand the functionality of our products. Approximately one third of our employees are dedicated to research and development initiatives, conducted primarily in the United States, India and Israel.

Our research and development expenses were \$227.5 million in 2015, \$226.5 million in 2014, and \$221.9 million in 2013. Additional information about our research and development expenditures may be found in Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Results of Operations-Costs and Expenses-Research and Development.”

Sales and Marketing

We derive most of our revenue from products and services sold directly by our sales force to end-user customers. Approximately 20% to 25% of our products and services are sold through third-party resellers and other strategic partners. Our sales force focuses on large accounts, while our reseller channel provides a cost-effective means of covering the small- and medium-size business market. Our strategic services partners provide service offerings to help customers implement our product offerings. As we grow our Technology Platform business, we expect our go-to-market strategy will rely more on channel partners and marketing directly to end users and developers.

Strategic Partners

Building an ecosystem of strategic partners will become increasingly important as we expand our Technology Platform offerings and seek to improve the efficiency with which we deliver our traditional products and services. With this in mind, we have recently entered into strategic partner relationships to jointly market, sell, and develop integrated products and services.

Competition

We compete with technology providers who target discrete manufacturers. We compete with a number of companies that offer solutions that address one or more specific functional areas covered by our solutions, including Dassault Systèmes SA and Siemens AG for traditional CAD solutions, PLM solutions, manufacturing planning solutions and visualization and digital mock-up solutions; Oracle Corporation and SAP AG for PLM solutions and SLM solutions; and IBM Corporation and Hewlett Packard for ALM solutions. We believe our products are more specifically targeted toward the business process challenges of

manufacturing companies and offer broader and deeper functionality for those processes than ERP-based solutions. We also compete in the CAD market with design products such as Autodesk, Inc.'s Inventor, Siemens AG's Solid Edge and Dassault Systemes SA's SolidWorks for sales to smaller manufacturing customers. In our Technology Platform business, we compete with large established companies like IBM Corporation, Microsoft, Cisco, Oracle, SAP, and General Electric. Additionally, there are a number of small companies that compete in the market for IoT products.

Proprietary Rights

Our software products and related technical know-how, along with our trademarks, including our company names, product names and logos, are proprietary. We protect our intellectual property rights in these items by relying on copyrights, trademarks, patents and common law safeguards, including trade secret protection. The nature and extent of such legal protection depends in part on the type of intellectual property right and the relevant jurisdiction. In the U.S., we are generally able to maintain our trademark registrations for as long as the trademarks are in use and to maintain our patents for up to 20 years from the earliest effective filing date. We also use license management and other anti-piracy technology measures, as well as contractual restrictions, to curtail the unauthorized use and distribution of our products.

Our proprietary rights are subject to risks and uncertainties described under Item 1A. "Risk Factors" below. You should read that discussion, which is incorporated into this section by reference.

Backlog

We define backlog as contractually committed orders for license, subscription and support with a customer for which the associated revenue has not been recognized and the customer has not been invoiced. Deferred revenue primarily relates to software support agreements invoiced to customers for which the revenue has not yet been recognized. Customer commitments for amounts that are not in deferred revenue and have not yet been invoiced to customers related to multi-year support and subscription contracts totaled approximately \$210 million at September 30, 2015 (compared to approximately \$185 million at September 30, 2014), of which we expect to invoice customers approximately \$140 million within the next twelve months.

Employees

As of September 30, 2015, we had 5,982 employees, including 1,998 in product development; 1,857 in customer support, training, consulting, cloud services and product distribution; 1,416 in sales and marketing; and 711 in general and administration. Of these employees, 2,263 were located in the United States and 3,719 were located outside the United States.

Website Access to Reports and Code of Business Conduct and Ethics

We make available free of charge on our website at www.ptc.com the following reports as soon as reasonably practicable after electronically filing them with, or furnishing them to, the SEC: our Annual Reports on Form 10-K; our Quarterly Reports on Form 10-Q; our Current Reports on Form 8-K; and amendments to those reports filed or furnished pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934. Our Proxy Statements for our Annual Meetings and Section 16 trading reports on SEC Forms 3, 4 and 5 also are available on our website. The reference to our website is not intended to incorporate information on our website into this Annual Report by reference.

Our Code of Ethics for Senior Executive Officers is also available on our website. Additional information about this code and amendments and waivers thereto can be found below in Part III, Item 10 of this Annual Report.

Executive Officers

Information about our executive officers is incorporated by reference from Part III, Item 10 of this Annual Report.

Corporate Information

PTC was incorporated in Massachusetts in 1985 and is headquartered in Needham, Massachusetts.

ITEM 1A. Risk Factors

The following are important factors we have identified that could affect our future results. You should consider them carefully when evaluating an investment in PTC's securities or any forward-looking statements made by us, including those contained in this Annual Report, because these factors could cause actual results to differ materially from historical results or

the performance projected in forward-looking statements. The risks described below are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially adversely affect our business, financial condition and/or operating results.

I. Operational Considerations

Our operating results fluctuate from quarter to quarter, making future operating results difficult to predict; failure to meet market expectations could cause the price of our securities to decline.

Our quarterly operating results historically have fluctuated and are likely to continue to fluctuate depending on a number of factors, including:

- a high percentage of our revenue historically has been generated in the third month of each fiscal quarter and any failure to receive, complete or process orders at the end of any quarter could cause us to fall short of our revenue targets;
- a significant percentage of our revenue comes from transactions with large customers, which tend to have long lead times that are less predictable;
- one or more industries that we serve may have weak or negative growth;
- our operating expenses are largely fixed in the short term and are based on expected revenues and any failure to achieve our revenue targets could cause us to miss our earnings targets as well;
- our mix of license, subscription and service revenues can vary from quarter to quarter, creating variability in our operating margins;
- because a significant portion of our revenue comes from outside the U.S. and a significant portion of our expense structure is located internationally, shifts in foreign currency exchange rates could adversely affect our reported results; and
- we may incur significant expenses in a quarter in connection with corporate development initiatives, restructuring efforts or the investigation, defense or settlement of legal actions that would increase our operating expenses and reduce our earnings for the quarter in which those expenses are incurred.

Accordingly, our quarterly results are difficult to predict prior to the end of the quarter and we may be unable to confirm or adjust expectations with respect to our operating results for a particular quarter until that quarter has closed. Any failure to meet our quarterly revenue or earnings targets could adversely impact the market price of our securities.

We now offer our solutions as subscriptions, which will adversely affect our revenue and earnings in the transition period and make predicting our revenue and earnings more difficult.

We began offering most of our solutions under a subscription option in 2015, in addition to our perpetual license option. Under a subscription, customers pay a periodic fee for the right to use our software and receive support, or to use our cloud services and have us manage the application for a specified period. We believe that a significant number of our customers will elect to purchase our solutions as subscriptions rather than under a perpetual license (if available). Until we have fully transitioned to a stable mix of subscription and perpetual license purchases, we expect that our license revenue will decrease due to the difference in revenue recognition for a subscription license (revenue is recognized ratably over the term of the license) and a perpetual license (revenue is generally recognized upon purchase) and that our support revenue (which comprises a significant portion of our revenue) may also decrease due to support services being included in the subscription offering.

Our revenue and earnings targets are based on assumptions about the mix of revenue that will be attributable to subscription and perpetual license revenue. If a greater percentage of our customers elect to purchase our solutions as subscriptions in a period than we assumed, our revenue and earnings will likely fall below our expectations for that period, which could cause our stock price to decline.

Our long range financial targets are predicated on revenue growth and operating margin improvements that we may fail to achieve, which could reduce our expected earnings and cause us to fail to meet the expectations of analysts or investors and cause the price of our securities to decline.

We are projecting long-term revenue and earnings growth. However, as we transition to a subscription model, our plan through 2021 assumes that our license revenue and earnings will decrease in 2016, 2017 and 2018 due to lower up-front revenue recognized for a subscription license compared to a perpetual license, and assumes increases in revenue from a recurring subscription revenue stream beginning in 2019. Our projections are based on the expected growth potential in the IoT and SLM markets, with more modest growth expectations for CAD and ePLM. We may not achieve the expected bookings and

revenue growth if the markets we serve do not grow at expected rates, if we are not able to deliver solutions desired by customers and potential customers, and/or if acquired businesses do not generate the revenue growth that we expect.

Our long-term operating margin improvement is predicated on operating leverage as long range revenue increases, improved operating efficiencies, particularly within our sales organization and service margin improvements. Services margins are significantly lower than license and support margins. Future projected improvements in our operating margin as a percent of revenue are based in part on our ability to improve services margins by reducing the amount of direct services that we perform through expansion of our service partner program, and improving the profitability of services that we perform. If our services revenue increases as a percentage of total revenue and/or if we are unable to improve our services margins, our overall operating margin may not increase to the levels we expect or may decrease. Additionally, if we do not achieve lower sales and marketing expenses as a percentage of revenue through productivity initiatives, we may not achieve our operating margin targets. If operating margins do not improve, our earnings could be adversely affected and the price of our securities could decline.

Our significant investment in our Technology Platform business may not generate the revenues we expect.

We have made a significant investment in recent years in our Technology Platform business, including four acquisitions totaling approximately \$450 million. Our Technology Platform business provides technology solutions that enable customers to transform their businesses and leverage the opportunities created by the Internet of Things (IoT).

The Technology Platform market is a new market for us that requires us to adopt a new sales approach. The go-to-market approach for the Technology Platform business relies on an extensive and differentiated partner ecosystem to enable us to access markets and customers beyond our traditional markets, customers and buyers. We also expect to focus on marketing directly to software application developers to become the Technology Platform of choice for the IoT. We may be unable to expand our partner ecosystem as we expect and developers may not adopt our Technology Platform solutions as we expect, which would adversely affect our ability to realize revenue from our investments in this business.

Further, the Internet of Things is a relatively new market and there are a significant number of competitors in the market. If the market does not expand as rapidly as we or others expect or if customers adopt competitive solutions rather than our solutions, our Technology Platform business may not generate the revenues we expect.

Businesses we acquire may not generate the revenue and earnings we anticipate and may otherwise adversely affect our business.

We have acquired, and intend to continue to acquire, new businesses and technologies. If we fail to successfully integrate and manage the businesses and technologies we acquire, or if an acquisition does not further our business strategy as we expect, our operating results will be adversely affected.

Moreover, business combinations also involve a number of risks and uncertainties that can adversely affect our operations and operating results, including:

- difficulties managing an acquired company's technologies or lines of business or entering new markets where we have limited or no prior experience or where competitors may have stronger market positions;
- unanticipated operating difficulties in connection with the acquired entities, including potential declines in revenue of the acquired entity;
- failure to achieve the expected return on our investments which could adversely affect our business or operating results and impair the assets that we recorded as a part of an acquisition including intangible assets and goodwill;
- diversion of management and employee attention;
- loss of key personnel;
- assumption of unanticipated legal or financial liabilities or other unidentified issues with the acquired business;
- potential incompatibility of business cultures;
- significant increases in our interest expense, leverage and debt service requirements if we incur additional debt to pay for an acquisition; and
- if we were to issue a significant amount of equity securities in connection with future acquisitions, existing stockholders may be diluted and earnings per share may decrease.

Our restructuring actions and reorganization may be disruptive and could harm our operations.

Over the past few years, we have taken a number of restructuring actions and reorganizations designed to realign our global workforce to our business needs, reduce our expenses and enable us to increase investment in our Technology Platform business. These actions may not have the expected long-term effect on our expenses or may not be sufficient to fully offset additional investments we may make in our business. Disruptions in operations have occurred and will likely continue to occur as a result of these actions. Disruptions may include attrition beyond our planned reduction in workforce, a negative effect on employee morale or our ability to attract highly skilled employees. Further, we could experience delays, business disruptions, decreased productivity, unanticipated employee turnover and increased litigation related costs in connection with the restructuring and other efficiency initiatives.

We recently committed to a plan to reduce costs and realign investments with what we believe are our high growth opportunities by reducing our workforce and consolidating facilities. This restructuring may result in higher charges than anticipated and / or our actual projected expense reductions may fall below our expectations.

We depend on sales within the discrete manufacturing sector and our business could be adversely affected if manufacturing activity does not grow or if it contracts.

A large amount of our revenue is related to sales to customers in the discrete manufacturing sector. If this economic sector does not grow, or if it contracts, our customers in this sector may, as they have in the past, reduce or defer purchases of our products and services, which adversely affects our business. In 2015, the manufacturing sector was weak, particularly in the Americas and China, which we believe adversely impacted our sales and operating results in those regions in 2015. We expect global manufacturing economic conditions could continue to adversely impact our results in 2016, particularly in the U.S. and China.

We face significant competition, which may reduce our profits and limit or reduce our market share.

The market for product development solutions and IoT solutions is rapidly changing and characterized by vigorous competition, both by entry of competitors with innovative technologies and by consolidation of companies with complementary products and technologies. This competition could result in price reductions for our products and services, reduced margins, loss of customers and loss of market share. Our primary competition comes from:

- larger companies that offer competitive solutions;
- larger, more well-known enterprise software providers with greater financial, technical, sales and marketing, and other resources; and
- other vendors of various competitive point solutions or IoT platforms.

In addition, barriers to entry into certain segments of the software industry have declined and the ability of customers to adopt software solutions has increased with the ability to offer software in the cloud and the increasing prevalence of subscription license models and customer acceptance of both those models. Because of these and other factors, competitive conditions in the industry are likely to intensify in the future.

Increased competition could result in price reductions, reduced net revenue and profit margins and loss of market share, any of which would likely harm our business.

A breach of security in our products or computer systems, or those of our third-party service providers, could compromise the integrity of our products, harm our reputation, create additional liability and adversely impact our financial results.

We have implemented and continue to implement measures intended to maintain the security and integrity of our products, source code and computer systems. The potential consequences of a security breach or system disruption (particularly through cyber-attack or cyber-intrusion, including by computer hackers, foreign governments and cyber terrorists) have increased in scope as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. Despite efforts to create security barriers to such threats, it is virtually impossible for us to entirely eliminate this risk. In addition, we offer cloud services to our customers and some of our products are hosted by third-party service providers, which expose us to additional risks as those repositories of our customers' proprietary data may be targeted by such hackers. A significant breach of the security and/or integrity of our products or systems, or those of our third-party service providers, could prevent our products from functioning properly, could enable access to sensitive, proprietary or confidential information, including that of our customers, without authorization, or could disrupt our business operations or those of our customers. This could require us to incur significant costs of remediation, harm our reputation, cause customers to stop buying our products,

and cause us to face lawsuits and potential liability, which could have a material adverse effect on our financial condition and results of operations.

Our sales and operations are globally dispersed, which exposes us to additional compliance risks.

We sell and deliver software and services, and maintain support operations, in a large number of countries whose laws and practices differ from one another and are subject to unexpected changes. Managing these geographically dispersed operations requires significant attention and resources to ensure compliance with laws of those countries and those of the U.S. governing our activities in non-U.S. countries.

Those laws include, but are not limited to, anti-corruption laws and regulations (including the U.S. Foreign Corrupt Practices Act (FCPA) and the U.K. Bribery Act 2010) and trade and economic sanctions laws and regulations (including laws administered by the U.S. Department of the Treasury's Office of Foreign Assets Control, the U.S. State Department, the U.S. Department of Commerce, the United Nations Security Council and other relevant sanctions authorities). The FCPA and UK Bribery Act prohibit us and business partners or agents acting on our behalf from offering or providing anything of value to persons considered to be foreign officials under those laws for the purposes of obtaining favorable treatment. The UK Bribery Act also prohibits commercial bribery and accepting bribes. Our compliance risks with these laws are heightened due to the global nature of our business, the fact that we operate in, and are expanding into, countries with a higher incidence of corruption and fraudulent business practices than others, and the fact that we deal with governments and state-owned business enterprises, the employees and representatives of which may be considered foreign officials for purposes of the FCPA and the UK Bribery Act.

Accordingly, while we strive to maintain a comprehensive compliance program, we cannot guarantee that an employee, agent or business partner will not act in violation of our policies or U.S. or other applicable laws. Investigations of alleged violations of those laws can be expensive and disruptive. Violations of such laws can lead to civil and/or criminal prosecutions, substantial fines and other sanctions, including the revocation of our rights to continue certain operations and also cause business and reputation loss. For example, as discussed in Risk Factors II. Other Considerations, we are currently in discussions with the U.S. Securities and Exchange Commission and U.S. Department of Justice to attempt to resolve an investigation concerning certain payments and expenses by certain business partners and employees in China that raise questions of compliance with laws, including the U.S. Foreign Corrupt Practices Act, and/or compliance with our business policies.

Our international businesses present economic and operating risks.

We expect that our international operations will continue to expand and to account for a significant portion of our total revenue. Because we transact business in various foreign currencies, the volatility of foreign exchange rates has had and may in the future have a material adverse effect on our revenue, expenses and operating results.

Other risks inherent in our international operations include, but are not limited to, the following:

- difficulties in staffing and managing foreign sales and development operations;
- possible future limitations upon foreign-owned businesses;
- increased financial accounting and reporting burdens and complexities;
- inadequate local infrastructure; and
- greater difficulty in protecting our intellectual property.

We may be unable to adequately protect our proprietary rights.

Our software products are proprietary. We protect our intellectual property rights in these items by relying on copyrights, trademarks, patents and common law safeguards, including trade secret protection, as well as restrictions on disclosures and transferability contained in our agreements with other parties. Despite these measures, the laws of all relevant jurisdictions may not afford adequate protection to our products and other intellectual property. In addition, we frequently encounter attempts by individuals and companies to pirate our software. If our measures to protect our intellectual property rights fail, others may be able to use those rights, which could reduce our competitiveness and revenues.

In addition, any legal action to protect our intellectual property rights that we may bring or be engaged in could be costly, may distract management from day-to-day operations and may lead to additional claims against us, and we may not succeed, all of which would materially adversely affect our operating results.

Intellectual property infringement claims could be asserted against us, which could be expensive to defend and could result in limitations on our use of the claimed intellectual property.

The software industry is characterized by frequent litigation regarding copyright, patent and other intellectual property rights, as well as improper disclosure of confidential or proprietary information. If a lawsuit of this type is filed, it could result in significant expense to us and divert the efforts of our technical and management personnel. We cannot be sure that we would prevail against any such asserted claims. If we did not prevail, we could be prevented from using the claimed intellectual property or be required to enter into royalty or licensing agreements, which might not be available on terms acceptable to us. In addition to possible claims with respect to our proprietary products, some of our products contain technology developed by and licensed from third parties and we may likewise be susceptible to infringement claims with respect to these third-party technologies.

Some of our products contain “open source” software, and any failure to comply with the terms of one or more of these open source licenses could negatively affect our business and subject us to possible litigation.

Some of our products incorporate so-called “open source” software and we may incorporate open source software into other products in the future. Such open source software is generally licensed by its authors or other third parties under open source licenses. We monitor our use of open source software in an effort to avoid subjecting our products to conditions we do not intend. Although we believe that we have complied with our obligations under the various applicable licenses for open source software that we use, our processes used to monitor how open source software is used could be improperly followed or subject to error.

If an author or other third party that distributes such open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations. If our defenses were not successful, we could be subject to significant damages. We could also be enjoined from the distribution of our products that contained the open source software or be required to modify our products in order to comply with the conditions of the open source license(s) in question, thereby disrupting the distribution and sale of some of our products. In addition, if we combine our proprietary software with open source software in a certain manner, under some open source licenses we could be required to release the source code of our proprietary software, which would adversely affect our ability to derive revenue from the affected products.

Our financial condition could be adversely affected if significant errors or defects are found in our software.

Sophisticated software can sometimes contain errors, defects or other performance problems. If errors or defects are discovered in our products, we may need to expend significant financial, technical and management resources, or divert some of our development resources, in order to resolve or work around those defects, and we may not be able to correct them in a timely manner or provide an adequate response to our customers.

Errors, defects or other performance problems in our products could also cause us to lose revenue, lose customers and lose market share, and could subject to liability. Such defects or problems could also damage our business reputation and cause us to lose new business opportunities.

We may have exposure to additional tax liabilities and our effective tax rate may increase or fluctuate, which could increase our income tax expense and reduce our net income.

As a multinational organization, we are subject to income taxes as well as non-income based taxes in the U.S. and in various foreign jurisdictions. Significant judgment is required in determining our worldwide income tax provision and other tax liabilities. In the ordinary course of a global business, there are many intercompany transactions and calculations where the ultimate tax determination is uncertain. Our tax returns are subject to review by various taxing authorities. Although we believe that our tax estimates are reasonable, the final determination of tax audits or tax disputes could be different from what is reflected in our historical income tax provisions and accruals.

Our effective tax rate can be adversely affected by several factors, many of which are outside of our control, including:

- changes in tax laws, regulations, and interpretations in multiple jurisdictions in which we operate;
- assessments, and any related tax interest or penalties, by taxing authorities;
- changes in the relative proportions of revenues and income before taxes in the various jurisdictions in which we operate that have differing statutory tax rates;
- changes to the financial accounting rules for income taxes;

- unanticipated changes in tax rates; and
- changes to a valuation allowance on net deferred tax assets, if any.

Because we have substantial cash requirements in the United States and a significant portion of our cash is generated and held outside of the United States, if our cash available in the United States and the cash available under our credit facility is insufficient to meet our operating expenses and debt repayment obligations in the United States, we may be required to raise cash in ways that could negatively affect our financial condition, results of operations and the market price of our securities.

We have significant operations outside the United States. As of September 30, 2015, approximately 72% of our cash and cash equivalents balance was held by subsidiaries outside the United States, with the remainder of the balance held by the U.S. parent or its subsidiaries in the United States. We believe that the combination of our existing United States cash and cash equivalents, future United States operating cash flows and cash available under our credit facility, are sufficient to meet our ongoing United States operating expenses and known capital requirements. However, if these sources of cash are insufficient to meet our future financial obligations in the United States, we will be required to seek other available funding sources or means to repatriate cash to the United States, which could negatively impact our results of operations, financial position and the market price of our securities.

II. Other Considerations

We have been investigating certain matters in China, the resolution of which could have a material adverse effect on our business and our results.

We have been in discussions with the U.S. Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) to resolve an investigation concerning expenditures by our business partners in China and by our China business, including for travel and entertainment, that apparently benefited employees of customers regarded as state owned enterprises in China. This matter involves issues regarding compliance with laws, including the U.S. Foreign Corrupt Practices Act. We have recorded liabilities of \$28.2 million as a result of our agreements in principle with those agencies to settle the matter. There can be no assurance that we will enter into final settlements on the agreed terms with these agencies or, if not, that the cost of any final settlements, if reached, would not exceed the existing accrual. Further, any settlement or other resolution of this matter could have collateral effects on our business in China, the United States and elsewhere.

We are required to comply with certain financial and operating covenants under our credit facility and to make scheduled debt payments as they become due; any failure to comply with those covenants or to make scheduled payments could cause amounts borrowed under the facility to become immediately due and payable and/or prevent us from borrowing under the facility.

Our credit facility consists of a \$1 billion revolving loan commitment that matures on September 15, 2019, at which time all remaining amounts outstanding will be due and payable in full. As of November 4, 2015, we had \$718 million outstanding under the credit facility. We may wish to borrow additional amounts under the facility in the future to support our operations, including for strategic acquisitions and share repurchases.

We are required to comply with specified financial and operating covenants and to make payments under the facility, which limit our ability to operate our business as we otherwise might operate it. Our failure to comply with any of these covenants or to meet any payment obligations under the facility could result in an event of default which, if not cured or waived, would result in any amounts outstanding, including any accrued interest and unpaid fees, becoming immediately due and payable. We might not have sufficient working capital or liquidity to satisfy any repayment obligations in the event of an acceleration of those obligations. In addition, if we are not in compliance with the financial and operating covenants at the time we wish to borrow funds, we will be unable to borrow funds.

We may be unable to meet our goal of returning 40% of free cash flow to shareholders through share repurchases, which could decrease your expected return on investment in PTC stock.

In August 2014, we announced a new capital allocation strategy, a component of which is a long-term goal of returning approximately 40% of free cash flow (cash flow from operations less capital expenditures) to shareholders through share repurchases. Meeting this goal requires PTC to generate consistent free cash flow in the years ahead in an amount sufficient to enable us to continue investing in organic and inorganic growth as well as to return a significant portion of the cash generated to stockholders in the form of share repurchases. We may not meet this goal if we do not generate the free cash flow we expect or if we use our available cash to satisfy other priorities. In addition, our cash flow fluctuates over the course of the year and over multiple years, so, although our goal is to return 40% of free cash flow to shareholders, that is an average over a longer

term and the number of shares repurchased and amount of free cash flow returned in any given period will vary and may be more or less than 40% in any such period. Finally, the number of shares repurchased for a given amount of cash will vary based on PTC's stock price, so the number of shares repurchased will not be a consistent or predictable number or percentage of outstanding stock.

Our stock price has been volatile, which may make it harder to resell your shares at a time and at a price that is favorable to you.

Market prices for securities of software companies are generally volatile and are subject to significant fluctuations that may be unrelated or disproportionate to the operating performance of these companies. The trading prices and valuations of these stocks, and of ours, may not be predictable. Negative changes in the public's perception of the prospects of software companies, or of PTC or the markets we serve, could depress our stock price regardless of our operating results.

Also, a large percentage of our common stock is held by institutional investors. Purchases and sales of our common stock by these institutional investors could have a significant impact on the market price of the stock. For more information about those investors, please see our proxy statement with respect to our most recent annual meeting of stockholders and Schedules 13D and 13G filed with the SEC with respect to our common stock.

ITEM 1B. Unresolved Staff Comments

None.

ITEM 2. Properties

We currently lease 99 offices used in operations in the United States and internationally, predominately as sales and/or support offices and for research and development work. Of our total of approximately 1,369,000 square feet of leased facilities used in operations, approximately 579,000 square feet are located in the U.S., including 321,000 square feet at our headquarters facility located in Needham, Massachusetts, and approximately 222,000 square feet are located in India, where a significant amount of our research and development is conducted. We believe that our facilities are adequate for our present and foreseeable needs.

ITEM 3. Legal Proceedings

We are subject to various legal proceedings and claims that arise in the ordinary course of business. Except for the China matter described in ITEM 1. Risk Factors *II. Other Considerations* and Note I *Commitments and Contingencies* of "Notes to Consolidated Financial Statements" in this Annual Report, which information is incorporated herein by reference, we currently believe that resolving these matters will not have a material adverse impact on our financial condition, results of operations or cash flows. However, the results of legal proceedings cannot be predicted with certainty. Should any of these legal matters be resolved against us, the operating results for a particular reporting period could be adversely affected.

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

Information with respect to the market for our common stock is located in Selected Consolidated Financial Data beginning on page A-1 of this Form 10-K and is incorporated herein by reference.

On September 30, 2015, the close of our fiscal year, as well as on November 13, 2015, our common stock was held by 1,355 shareholders of record.

We do not pay cash dividends on our common stock and we retain earnings for use in our business or to repurchase our shares. Although we review our dividend policy periodically, our review may not cause us to pay any dividends in the future.

Further, our credit facility requires us to maintain specified leverage and fixed-charge ratios that limit the amount of dividends that we could pay.

The table below shows the shares of our common stock we repurchased in the fourth quarter of 2015.

ISSUER PURCHASES OF EQUITY SECURITIES

Period (1)	Total Number of Shares (or Units) Purchased	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
July 5 - August 1, 2015	—	—	—	\$425,038,003 (2)
August 2 - August 29, 2015	434,300	\$ 34.49	434,300	\$410,059,854 (2)
August 30 - September 30, 2015	—	—	—	\$410,059,854 (2)
Total	434,300	\$ 34.49	434,300	\$410,059,854 (2)

- (1) Periods are our fiscal months within the fiscal quarter.
(2) In August 2014, our Board authorized us to repurchase up to \$600 million worth of our shares in the period August 4, 2014 through September 30, 2017, which repurchase program we announced on August 4, 2014.

ITEM 6. Selected Financial Data

Our five-year summary of selected financial data and quarterly financial data for the past two years is located on pages A-1 and A-2 at the end of this Form 10-K and incorporated herein by reference.

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

Forward-Looking Statements

Statements in this Annual Report about anticipated financial results and growth, as well as about the development of our products and markets, are forward-looking statements that are based on our current plans and assumptions. Important information about the bases for these plans and assumptions and factors that may cause our actual results to differ materially from these statements is contained below and in Item 1A. "Risk Factors" of this Annual Report.

Unless otherwise indicated, all references to a year reflect our fiscal year that ends on September 30.

Executive Overview

Results for 2015

Revenue was down year over year due to changes within our business including a higher mix of subscription revenue in 2015 compared to 2014 as we transition from selling perpetual licenses to a subscription-based licensing model, as well as external factors, including a challenging macroeconomic environment and the impact of foreign currency exchange rates on our reported revenue due to an increase in the strength of the U.S. Dollar relative to international currencies, most notably the Euro and the Yen.

Revenue	Year Ended		Change	Constant Currency Change
	September 30, 2015	September 30, 2014		
	(in millions)			
License and Subscription	\$ 348.0	\$ 389.7	(11)%	(4)%
Support	681.5	688.5	(1)%	7 %
Total Software	1,029.5	1,078.2	(5)%	3 %
Professional Services	225.7	278.7	(19)%	(12)%
Total	\$ 1,255.2	\$ 1,357.0	(8)%	— %

- Software revenue declined due to unfavorable currency movements and fewer large license transactions in the year than in the prior year. Perpetual license revenue declined \$80 million in 2015 compared to 2014 (\$56 million on a

constant currency basis). We believe that challenging macroeconomic conditions and execution issues impacted our ability to close large license transactions in our core business. Additionally, 2015 was a difficult comparison in relation to 2014, in which CAD and ePLM had double digit software revenue growth due in part to customer contract cycles.

- Year-over-year revenue declines were partially offset by revenue from businesses acquired in 2014. On an organic basis (excluding revenue from acquired businesses), total license and subscription (L&S) revenue was down 18% year over year.
- Professional services revenue declined primarily due to a shift of services to our partners in accordance with our margin improvement strategy.
- We delivered strong growth in our Internet of Things business, closing a number of significant deals with large, industrial companies that are adopting our platform for their IoT initiatives. IoT license revenue represented more than 10% of our total L&S revenue in 2015, compared to 1% in 2014.
- Approximately 58% of our revenue in 2015 came from recurring revenue streams (subscription solutions and support), compared to approximately 52% in 2014.

From a geographic perspective, we believe macroeconomic challenges in the Americas and Europe impacted our ability to close large CAD and ePLM deals, which, given the maturity of these markets, tend to be more cyclical. Total Software revenue was flat in the Americas as growth in our IoT and SLM businesses offset our weaker results in CAD and ePLM. In Europe, we saw 4% software revenue growth on a constant currency basis, driven by IoT, SLM, and ePLM with a decline in CAD. Pacific Rim software revenue declined modestly due to weak results in ePLM and SLM, which we believe was primarily due to the overall economic slowdown in China. Japan software revenue increased 9% in 2015 on a constant currency basis from 2014 due to L&S revenue growth in IoT, SLM and ePLM, offset by a decline in CAD.

Other Operating Measures	Year Ended		Change	Constant Currency Change
	September 30, 2015	September 30, 2014		
Operating Margin	3.3%	14.5%	(77)%	(64)%
EPS	\$0.41	\$1.34	(69)%	(57)%
Non-GAAP Operating Margin⁽¹⁾	24.2%	25.1%	(4)%	5 %
Non-GAAP EPS⁽¹⁾	\$2.23	\$2.17	3 %	21 %

(1) Non-GAAP measures are reconciled to GAAP results under *Results of Operations - Non-GAAP Measures* below.

GAAP and non-GAAP operating income reflect lower revenue, offset by reductions in operating expenses driven by cost savings from restructuring actions and by lower incentive compensation accruals associated with performance based incentive compensation plans for which the associated performance metrics were not achieved. Additionally, our GAAP operating margin includes a \$66 million pension settlement loss due to the termination of our U.S. pension plan, a \$28 million accrual associated with the pending China matter and restructuring charges of \$43 million due to our April 2015 restructuring plan. Currency movements reduced GAAP EPS by approximately \$0.26. Both GAAP and non-GAAP EPS benefited from a lower tax rate.

Our GAAP results reflect a tax benefit of \$19 million related to the reversal of a portion of the U.S. valuation allowance related to reducing deferred tax assets in connection with settling the U.S. pension plan and a tax benefit of \$18 million in 2014 related to the reversal of a portion of the valuation allowance on net deferred tax assets in the U.S. and a foreign jurisdiction as a result of accounting for acquisitions.

We generated \$180 million of cash from operations in 2015, down 41% from \$305 million in 2014, and we borrowed \$56 million under our credit facility to fund acquisitions and stock repurchases. The decrease in cash from operations in 2015 compared to 2014 was due in part to pension funding which was higher by \$34 million and restructuring payments which were higher by \$33 million. We used \$99 million of cash to acquire ColdLight and \$65 million to repurchase stock. At September 30, 2015, the balance outstanding under our credit facility was \$668 million and we had \$155 million available to borrow under the revolving loan portion of our credit facility. We ended 2015 with \$273 million of cash, down from \$294 million at the end 2014.

Acquisitions

In 2015, we acquired ColdLight Solutions, LLC for \$99 million. ColdLight offers solutions for data machine learning and predictive analytics, which expanded our technology portfolio in the IoT market. ColdLight was not material to our results

for 2015.

2015 Restructuring of Our Workforce

In April 2015, we committed to a plan to restructure our global workforce and consolidate select facilities to increase investment in our IoT business and to reduce our cost structure through organizational efficiencies in the face of significant foreign currency depreciation relative to the U.S. Dollar and a more cautious outlook on global macroeconomic conditions. The restructuring actions resulted in charges of \$43 million during 2015, including \$1 million of facility related charges and \$42 million of employee related termination costs, primarily related to termination benefits associated with 411 employees. This reorganization resulted in net annualized expense reductions of approximately \$30 million. We recently announced a 2016 restructuring plan as described below in *Future Expectations, Strategies and Risks*.

Pension Termination

We maintained a U.S. defined benefit pension plan that covered certain persons who were employees of Computervision Corporation (acquired by us in 1998). Benefits under the plan were frozen in 1990. In the second quarter of 2014, we began the process of terminating the plan, which included settling plan liabilities by offering lump sum distributions to certain plan participants and purchasing annuity contracts to cover vested benefits. We completed the termination in the fourth quarter of 2015. In connection with the termination, we contributed \$25.5 million to the plan and recorded a settlement loss of \$66 million.

Future Expectations, Strategies and Risks

The slowdown in the global manufacturing industry, uncertainty about the economic environment, volatility in foreign currency exchange rates, and our transition to a subscription model were headwinds for revenue and earnings growth in fiscal 2015. While we saw indications of improvements in global manufacturing economic conditions early in 2015, recent economic indicators raise continued concerns about the economic climate and current indicators suggest the global manufacturing economy is weaker than we experienced entering 2015, with foreign currency depreciation and other acute macro factors potentially weighing on our multinational customers, particularly in the Americas, China and Japan.

Looking forward, as we move into 2016, we have three overriding goals: 1) to focus on driving sustainable growth, 2) to expand our subscription-based licensing, and 3) to continue to control costs and improve margins.

Sustainable Growth

Our goals for overall growth are predicated on continuing to expand our IoT technology footprint and making structural changes to our business to improve operational performance and increase growth potential for both our new IoT solutions as well as our core solutions. We continue to invest in IoT solutions, most recently with our acquisitions of ColdLight and Vuforia. As described in 2015 Business Developments, *Corporate Organizational Changes* above, effective in 2016, we have reorganized the company into two main business units: the Solutions Group, comprised of our core CAD, ePLM and SLM business, and the Technology Platform Group, comprised of our IoT, analytics and augmented reality business. This new structure will allow for appropriate focus on both the core Solutions and the Technology Platform business.

Subscription

A majority of our software license sales to date have been perpetual licenses, where customers own the software license and revenue is recognized at the time of sale. Due to evolving customer preferences, our plan to increase our recurring revenue base, as well as acquisitions we have made in the IoT and cloud services space, we began offering our products under a subscription license model in 2015. A small but growing percentage of our business now consists of ratably recognized subscriptions. Under a subscription, customers do not own the software license but pay a periodic fee for the right to use our software, including access to technical support. Beginning October 1, 2015 we launched the second phase of our subscription program with the goal of accelerating our transition to a predominantly subscription-based licensing model. To drive that acceleration, we launched new pricing and packaging for subscriptions and new sales incentive compensation plans to drive our business toward subscription. We are targeting that by 2018, a significant majority of our L&S bookings could be subscription. In 2016, we expect that subscription bookings will increase over 2015, but will still constitute significantly less than a majority of bookings. If a greater percentage of our customers elect our subscription offering in 2016 than our base case assumption, it will have an adverse impact on revenue, operating margin, cash flow and EPS growth relative to our expectations. In addition, subscription orders tend to be smaller in size than perpetual deals.

Cost Controls and Margin Expansion

We continue to proactively manage our cost structure and invest in what we believe are high return opportunities in our business. Our goal is to drive continued margin expansion over the long term. To that end, on October 23, 2015, we committed to a plan to restructure our workforce and consolidate select facilities in order to reduce our cost structure and to realign our investments with our identified growth opportunities. The restructuring is expected to result in a charge of approximately \$40 million to \$50 million, which is primarily attributable to termination benefits, substantially all of which will be recorded in our first fiscal quarter ending January 2, 2016. The restructuring will result in cash expenditures of approximately \$40 million to \$50 million, which we expect will primarily be paid over the first three quarters of fiscal 2016. We expect that the effect of the expense reductions, offset by certain planned cost increases and investments in our business, will result in a decrease in costs and expenses of approximately \$17 million in 2016, as compared to 2015, which effect is contemplated in our financial guidance for fiscal 2016.

2016 Guidance

For 2016, we expect year-over-year revenue to decrease 3% to 5% due to our subscription transition and expected decrease in professional services revenue. While Subscription revenue is expected to grow by approximately 35% in 2016, the subscription transition is expected to result in a 2% decrease in support revenue and 8% to 15% decrease in perpetual revenue. Professional services revenue is expected to decrease 12% due to further transition of certain customers to our partners and ongoing development of solutions that require less professional services to deploy. Our results will differ materially from our guidance if economic conditions do not improve or deteriorate further, if foreign currency exchange rates relative to the U.S. Dollar differ significantly from our current assumed rates, if customers do not purchase subscriptions at the rate we expect, if our businesses do not grow as we have assumed, or if our cost reductions do not achieve the expected results.

In November 2015, we acquired the Vuforia business from Qualcomm Connected Experiences, Inc. for \$65 million in cash. Vuforia is an augmented reality technology platform that expands our Technology Platform portfolio.

Our results have been impacted, and we expect will continue to be impacted, by our ability to close large transactions. The amount of bookings and revenue, particularly license and subscriptions, attributable to large transactions, and the number of such transactions, may vary significantly from quarter to quarter based on customer purchasing decisions and macroeconomic conditions. Such transactions may have long lead times as they often follow a lengthy product selection and evaluation process, and for existing customers, are influenced by contract expiration cycles. This may cause volatility in our results. In 2016, we expect large license transactions will continue to be unfavorably impacted by a challenging global manufacturing economy, particularly affecting our CAD and ePLM businesses. In addition, we expect that deal sizes will decrease as we expect that customers will purchase more of our solutions as subscriptions, which may involve smaller purchases than perpetual license purchases.

Impact of an Investigation in China

As previously announced, we have been in discussions with the U.S. Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) to resolve an investigation concerning expenditures by our business partners in China and by our China business, including for travel and entertainment, that apparently benefited employees of customers regarded as state owned enterprises in China. This matter involves issues regarding compliance with laws, including the U.S. Foreign Corrupt Practices Act. We have recorded liabilities of \$28.2 million as a result of our agreements in principle with those agencies to settle the matter. There can be no assurance that we will enter into final settlements on the agreed terms with these agencies or if not, that the cost of any final settlements, if reached, would not exceed the existing accrual. Further, any settlement or other resolution of this matter could have collateral effects on our business in China, the United States and elsewhere.

Revenue, Operating Margin, Earnings per Share and Cash Flow

The following table shows the financial measures that we consider the most significant indicators of the performance of our business. In addition to providing operating income, operating margin, and diluted earnings per share as calculated under generally accepted accounting principles (“GAAP”), it shows non-GAAP operating income, operating margin, and diluted earnings per share for the reported periods. These non-GAAP measures exclude fair value adjustments related to acquired deferred revenue, acquired deferred costs, stock-based compensation expense, amortization of acquired intangible assets expense, acquisition-related and pension plan termination costs, restructuring charges, certain identified gains or charges included in non-operating other income (expense) and the related tax effects of the preceding items, as well as the tax items identified. These non-GAAP measures provide investors another view of our operating results that is aligned with management

budgets and with performance criteria in our incentive compensation plans. Management uses, and investors should use, non-GAAP measures in conjunction with our GAAP results. We discuss the non-GAAP measures in detail under *Non-GAAP Measures* below.

			Percent Change 2014 to 2015				Percent Change 2013 to 2014	
	2015	2014	Actual	Constant Currency	2013	Actual	Constant Currency	
(Dollar amounts in millions, except per share data)								
L&S revenue	\$ 348.0	\$ 389.7	(11)%	(4)%	\$ 354.3	10 %	10 %	
Support revenue	681.5	688.5	(1)%	7 %	654.7	5 %	5 %	
Total software revenue	1,029.5	1,078.2			1,009.0			
Professional services revenue	225.7	278.7	(19)%	(12)%	284.6	(2)%	(2)%	
Total revenue	1,255.2	1,357.0	(7)%	— %	1,293.5	5 %	5 %	
Cost of L&S	53.2	45.0			39.0			
Cost of support	82.8	84.7			81.1			
Cost of professional service	198.7	244.0			252.9			
Total cost of revenue	334.7	373.7			373.0			
Gross margin	920.5	983.3			920.5			
Operating expenses	878.9	786.7			793.2			
Total costs and expenses (1)	1,213.6	1,160.4	5 %	9 %	1,166.2	— %	— %	
Operating income (1)	\$ 41.6	\$ 196.6	(79)%	(57)%	\$ 127.3	54 %	52 %	
Non-GAAP operating income (1)	\$ 304.3	\$ 340.3	(11)%	5 %	\$ 286.3	19 %	18 %	
Operating margin (1)	3.3%	14.5%			9.8%			
Non-GAAP operating margin (1)	24.2%	25.1%			22.1%			
GAAP diluted earnings (loss) per share (2)	\$ 0.41	\$ 1.34			\$ 1.19			
Non-GAAP diluted earnings per share (2)	\$ 2.23	\$ 2.17			\$ 1.81			
Cash flow from operations	\$ 179.9	\$ 304.6			\$ 224.7			

- (1) Costs and expenses in 2015 included \$73.2 million of pension plan termination-related costs, \$43.4 million of restructuring charges, a \$28.2 million legal accrual, and \$8.9 million of acquisition-related costs. Costs and expenses in 2014 included \$28.4 million of restructuring charges and \$13.1 million of acquisition-related and pension plan termination costs. Costs and expenses in 2013 included \$52.2 million of restructuring charges and \$9.9 million of acquisition-related costs. These restructuring, acquisition-related, pension plan termination costs and legal accrual have been excluded from non-GAAP operating income, non-GAAP operating margin and non-GAAP diluted EPS.
- (2) Income taxes for non-GAAP diluted earnings per share reflect the tax effects of non-GAAP adjustments which are calculated by applying the applicable tax rate by jurisdiction to the non-GAAP adjustments described in *Non-GAAP Measures*, and also exclude the following non-operating income and tax items: The GAAP earnings per share in 2015 reflect a tax benefit of \$18.7 million related to the reversal of a portion of the U.S. valuation allowance related to reducing deferred tax assets in connection with settling the U.S. pension plan. GAAP diluted earnings per share in 2014 includes (i) tax benefits of \$18.1 million related to the release of a portion of the valuation allowance as a result of deferred tax liabilities established for acquisitions recorded in 2014 and (ii) a tax charge of \$3.5 million to establish valuation allowances against net deferred tax assets in two foreign jurisdictions. GAAP diluted earnings per share in 2013 includes (i) tax benefits of \$36.7 million related to the release of a portion of the valuation allowance as a result of deferred tax liabilities established for acquisitions recorded in 2013, (ii) tax benefits of \$3.2 million relating to the final resolution of a long standing tax litigation matter and completion of an international jurisdiction tax audit, (iii) a tax benefit of \$7.9 million related to the release of a portion of the valuation allowance in the U.S. as a result of a pension gain (decrease in unrecognized actuarial loss) recorded in accumulated other comprehensive income, and (iv) a tax benefit of \$2.6 million relating to a tax audit in a foreign jurisdiction of an acquired company. GAAP diluted earnings per share in 2013 also includes a gain on investment of \$0.6 million and a legal settlement gain of \$5.1 million.

Results of Operations

Acquisitions

In 2015, we acquired ColdLight (on May 7). In 2014, we acquired ThingWorx (on December 30), Atego (on June 30) and Axeda (on August 11). These acquisitions collectively added \$69.2 million of revenue in 2015 and \$9.8 million of revenue in 2014.

Impact of Foreign Currency Exchange on Results of Operations

Approximately two thirds of our revenue and half of our expenses are transacted in currencies other than the U.S. dollar. Currency translation affects our reported results, which are in U.S. Dollars. Changes in currency exchange rates, particularly for the Yen and the Euro, compared to the prior year decreased revenue and decreased expenses in 2015, and increased revenue and decreased expenses in 2014. If actual reported results were converted into U.S. dollars based on the corresponding prior year's foreign currency exchange rates, 2015 and 2014 revenue would have been higher by \$99.7 million and lower by \$2.1 million, respectively, and expenses would have been higher by \$56.6 million and \$0.9 million, respectively. The net impact on year-over-year results would have been an increase in operating income of \$43.1 million in 2015 and a decrease in operating income of \$3.0 million in 2014. The results of operations, revenue by line of business and revenue by geographic region in the tables that follow present both actual percentage changes year over year and percentage changes on a constant currency basis.

Reclassifications

Through 2014, we classified revenue in three categories: 1) license; 2) service; and 3) support. Because we introduced subscription-based licenses in 2015, we have revised our revenue reporting. Effective with the beginning of the first quarter of 2015, we report revenue as follows: 1) license and subscriptions (L&S); 2) support; and 3) professional services. L&S revenue includes perpetual license revenue, subscription revenue and cloud services revenue. Cloud service offerings were previously reflected in service revenue and cost of service revenue. Consulting and training service revenue and consulting and training cost of service revenue are now referred to as professional services revenue and cost of professional services revenue. The discussion that follows reflects our revised reporting structure.

Revenue

Revenue is reported below by line of business (license and subscription, support, and professional services), by solution area (CAD, Extended PLM (ePLM), SLM and IoT) and by geographic region (Americas, Europe, Pacific Rim and Japan).

Results include combined revenue from direct sales and our channel.

Revenue by Line of Business

	Year ended September 30,									
	2015		Percent Change 2014 to 2015		2014		Percent Change 2013 to 2014		2013	
	\$ Amount	% of Total Revenue	Actual	Constant Currency	\$ Amount	% of Total Revenue	Actual	Constant Currency	\$ Amount	% of Total Revenue
(Dollar amounts in millions)										
L&S revenue	\$ 348.0	28%	(11)%	(4)%	\$ 389.7	29%	10 %	10 %	\$ 354.3	27%
Support revenue	681.5	54%	(1)%	7 %	688.5	51%	5 %	5 %	654.7	51%
Total software revenue	1,029.5				1,078.2				1,009.0	
Professional Services revenue	225.7	18%	(19)%	(12)%	278.7	21%	(2)%	(2)%	284.6	22%
Total revenue	<u>\$1,255.2</u>	100%	(7)%	— %	<u>\$1,357.0</u>	100%	5 %	5 %	<u>\$1,293.5</u>	100%

Revenue by Solution

	Year ended September 30,						
	2015	Percent Change		2014	Percent Change		2013
		Actual	Constant Currency		Actual	Constant Currency	
(Dollar amounts in millions)							
CAD							
L&S revenue	\$ 125.8	(26)%	(20)%	\$ 170.5	13 %	13 %	\$ 150.4
Support revenue	366.8	(5)%	3 %	386.8	2 %	2 %	378.1
Total software revenue	492.7			557.3			528.5
Professional Services revenue	18.9	(22)%	(14)%	24.2	1 %	1 %	24.0
Total revenue	<u>\$ 511.6</u>	<u>(12)%</u>	<u>(4)%</u>	<u>\$ 581.5</u>	<u>5 %</u>	<u>5 %</u>	<u>\$ 552.4</u>
Extended PLM (ePLM)							
L&S revenue	\$ 134.2	(22)%	(14)%	\$ 171.4	12 %	12 %	\$ 152.6
Support revenue	239.2	4 %	10 %	231.0	7 %	6 %	216.6
Total software revenue	373.4			402.4			369.2
Professional Services revenue	151.3	(23)%	(15)%	196.9	(2)%	(3)%	201.9
Total revenue	<u>\$ 524.7</u>	<u>(12)%</u>	<u>(5)%</u>	<u>\$ 599.3</u>	<u>5 %</u>	<u>5 %</u>	<u>\$ 571.1</u>
SLM							
L&S revenue	\$ 43.8	1 %	7 %	\$ 43.4	(15)%	(16)%	\$ 51.3
Support revenue	70.4	— %	5 %	70.3	17 %	17 %	60.0
Total software revenue	114.2			113.8			111.3
Professional Services revenue	51.8	(9)%	(4)%	57.2	(3)%	(2)%	58.8
Total revenue	<u>\$ 166.1</u>	<u>(3)%</u>	<u>2 %</u>	<u>\$ 171.0</u>	<u>1 %</u>	<u>1 %</u>	<u>\$ 170.0</u>
IoT							
L&S revenue	\$ 44.1	893 %	904 %	\$ 4.4			\$ —
Support revenue	5.1	1,272 %	1,297 %	0.4			—
Total software revenue	49.2			4.8			—
Professional Services revenue	3.6	928 %	962 %	0.4			—
Total revenue	<u>\$ 52.9</u>			<u>\$ 5.2</u>			<u>\$ —</u>

L&S Revenue

2015 compared to 2014

The decline in L&S revenue in 2015 reflected year-over-year declines of 12% in the Americas, 15% in Europe (down 1% on a constant currency basis), and 5% in the Pacific Rim. Year-over-year amounts in Japan were flat and increased on a constant currency basis by 16%. The decreases were partially related to a higher mix of subscription bookings in 2015. Results also reflected lower L&S revenue, primarily due to fewer large license transactions in 2015. This was particularly true for CAD and PLM in Europe and the Americas. IoT revenue increased significantly, primarily as a result of our acquisition of Axeda.

Changes in foreign currency exchange rates unfavorably impacted L&S revenue by \$27.5 million in 2015 compared to 2014.

2014 compared to 2013

L&S revenue was strongest in Europe and the Americas, with 33% and 12% year-over-year growth, respectively, offsetting year-over-year declines in the Pacific Rim region, which was down 17%. CAD L&S revenue was driven by double digit year-over-year growth in Creo modules and upgrades, training software, and certain heritage products. SLM L&S revenue in 2014 decreased due to a slower-than-expected rebuilding of our pipeline after a strong 2013.

Changes in foreign currency exchange rates favorably impacted L&S revenue by \$0.7 million in 2014 compared to 2013.

Support Revenue

Support revenue is comprised of contracts to maintain new and/or previously purchased software. Support revenue has tended to be fairly stable and predictable year-to-year. However, with our transition to subscription sales, we expect support revenue will decline as customers purchase our solutions as subscriptions.

Support revenue decreased in 2015 compared to 2014 due to the effect of foreign currency exchange rates. Changes in currency unfavorably impacted support revenue by \$51.8 million in 2015 compared to 2014.

Support revenue increased 5% (\$33.8 million) in 2014 compared to 2013. Changes in foreign exchange rates did not have a significant effect on support revenue in 2014.

Professional Services Revenue

Consulting and training services engagements typically result from sales of new licenses, particularly of our ePLM and SLM solutions. Expanding our service partner program, under which service engagements are referred to third party service providers, is part of our overall margin expansion strategy. Additionally, over time, we anticipate implementing solutions that require fewer services. As a result, we do not expect that the amount of services we deliver will increase proportionately with any L&S revenue increases.

2015 compared to 2014

The decrease in professional services revenue for 2015 was primarily due to a 25% decrease in PLM-related services and changes in foreign currency exchange rates. We attribute the decline in total professional services revenue to lower PLM and, to a lesser extent, CAD L&S revenue and to success in expanding our service partner program.

Changes in foreign currency exchange rates unfavorably impacted professional services revenue by \$20.4 million in 2015 compared to 2014.

2014 compared to 2013

In 2014, professional services revenue declined slightly due to the expansion of our services partner program.

Revenue by Geographic Region

	2015	% of Total Revenue	Percent Change		2014	% of Total Revenue	Percent Change		2013	% of Total Revenue
			Actual	Constant Currency			Actual	Constant Currency		
(Dollar amounts in millions)										
Revenue by region:										
Americas	\$ 530.3	42%	(5)%	(4)%	\$ 558.7	41%	7 %	7 %	\$ 522.8	40%
Europe	\$ 467.8	37%	(11)%	3 %	\$ 528.1	39%	10 %	7 %	\$ 479.9	37%
Pacific Rim	\$ 139.2	11%	(6)%	(4)%	\$ 148.2	11%	(8)%	(9)%	\$ 161.6	13%
Japan	\$ 118.0	9%	(3)%	12 %	\$ 122.1	9%	(6)%	4 %	\$ 129.3	10%

A significant percentage of our annual revenue comes from large customers in the broader manufacturing space. As a result, L&S revenue growth in our core CAD and ePLM products historically has correlated to growth in broader measures of the global manufacturing economy, including GDP, industrial production and manufacturing PMI. PMI data in the fourth quarter of 2015, compared to the fourth quarter of 2014, suggests manufacturing economies in the U.S., China and Japan are slowing, while manufacturing activity in Europe has increased. For 2016, our financial guidance assumes a slower rate of growth in the manufacturing economies in the U.S., Japan, and the Pacific Rim.

Americas

In 2015, compared to 2014, Americas L&S revenue decreased 12% due primarily to a decrease in CAD and PLM L&S revenue, offset in part by increases in IoT L&S revenue (primarily due to our acquisition of Axeda) and SLM L&S revenue. Professional services revenue decreased by 23% and support revenue increased by 6%.

Americas revenue increased in 2014 compared to 2013 due to increases in all lines of business, primarily a 7% increase in support and a 12% increase in L&S revenue.

Europe

In 2015, compared to 2014, changes in foreign currency exchange rates, particularly the Euro, unfavorably impacted revenue by \$73.6 million. In 2015, Europe L&S revenue decreased 15% year over year (down 1% on a constant currency basis) with constant currency growth in IoT and ePLM and modest constant currency growth in SLM, offset by a decline in CAD. Europe support revenue decreased 7% year over year and increased 7% year-over-year on a constant currency basis.

In 2014 compared to 2013, Europe L&S revenue increased 33% and support revenue increased 7%. Europe professional services revenue decreased 3% year over year. Changes in foreign currency exchange rates, particularly the Euro, favorably impacted revenue in Europe by \$15.7 million in 2014 as compared to 2013.

Pacific Rim

In 2015, compared to 2014, Pacific Rim L&S revenue declined 5% year over year with growth in IoT and modest growth in CAD, offset by declines in ePLM and SLM. Pacific Rim support revenue increased 5% year over year and professional services revenue decreased 29%. Changes in foreign currency exchange rates unfavorably impacted revenue in the Pacific Rim by \$3.2 million in 2015 compared to 2014.

In 2014, compared to 2013, Pacific Rim L&S revenue declined 17% year over year and professional services revenue decreased 11%. Pacific Rim support revenue increased 7% year over year. Changes in foreign currency exchange rates favorably impacted revenue in the Pacific Rim by \$0.6 million in 2014 compared to 2013.

In 2015 and 2014, compared to the prior year, revenue in China decreased 14% and 12%, respectively, and represented 4% and 5%, respectively, of total revenue.

Japan

In 2015 and 2014 declines in Japan revenue were due to changes in foreign currency rates. In 2015 compared to 2014, Japan L&S revenue was flat, support revenue decreased 10% and professional services revenue increased 15%. On a constant currency basis, L&S revenue increased 16%, support revenue increased 5% and professional services revenue increased 34%. Changes in foreign currency exchange rates unfavorably impacted revenue in Japan by \$19.2 million in 2015 as compared to 2014.

In 2014 compared to 2013, Japan L&S revenue decreased 2%, support revenue decreased 8% and professional services revenue decreased 1%. On a constant currency basis, L&S revenue increased 5%, professional services revenue increased 9% and support revenue increased 3%. Changes in foreign currency exchange rates unfavorably impacted revenue in Japan by \$12.8 million in 2014 as compared to 2013.

Gross Margin

	2015	Percent Change	2014	Percent Change	2013
	(Dollar amounts in millions)				
Gross margin	\$ 920.5	(6)%	\$ 983.3	7%	\$ 920.5
Non-GAAP gross margin	953.4	(6)%	1,013.0	6%	951.6
Gross margin as a % of revenue:					
L&S	85%		88%		89%
Support	88%		88%		88%
Professional Services	12%		12%		11%
Gross margin as a % of total revenue	73%		72%		71%
Non-GAAP gross margin as a % of total non-GAAP revenue	76%		75%		73%

Gross margin as a percentage of total revenue in 2015 compared to 2014 reflects lower L&S margins due to a higher mix of cloud services revenue (due to our acquisition of Axeda), which has lower margins than license revenue, and higher support volume. Support revenue comprised 54% of our total revenue in 2015 compared to 51% in both 2014 and 2013.

Gross margin as a percentage of total revenue in 2014 compared to 2013 reflects higher service margins, partially offset by lower L&S margins primarily attributable to lower L&S revenue and higher amortization of acquired purchased software. The increase in our GAAP service gross margin in 2014 was due in part to improved consulting margin. Service margins have improved due to cost reductions and a reduction in the amount of direct services that we perform through expansion of our service partner program.

Costs and Expenses

	<u>2015</u>	<u>Percent Change</u>	<u>2014</u>	<u>Percent Change</u>	<u>2013</u>
Cost of L&S revenue	\$ 53.2	18 %	\$ 45.0	15 %	\$ 39.0
Cost of support revenue	82.8	(2)%	84.7	4 %	81.1
Cost of professional services revenue	198.7	(19)%	244.0	(4)%	252.9
Sales and marketing	338.8	(5)%	357.4	(1)%	360.6
Research and development	227.5	— %	226.5	2 %	221.9
General and administrative	166.7	17 %	142.2	8 %	131.9
U.S. pension settlement loss	66.3		—		—
Amortization of acquired intangible assets	36.1	12 %	32.1	21 %	26.5
Restructuring charges	43.4	53 %	28.4	(46)%	52.2
Total costs and expenses	<u>\$ 1,213.6</u>	5 % (1)	<u>\$ 1,160.4</u>	— % (1)	<u>\$ 1,166.2</u>
Total headcount at end of period	<u>5,982</u>	(7)%	<u>6,444</u> (2)	7 %	<u>6,000</u>

- (1) On a constant currency basis from the prior period, total costs and expenses increased 9% from 2014 to 2015 and were flat from 2013 to 2014.
- (2) Headcount at September 30, 2014 included approximately 250 employees with termination dates after September 30, 2014 that were included in our fourth quarter of 2014 restructuring actions.

2015 compared to 2014

Costs and expenses in 2015 compared to 2014 increased primarily as a result of the following:

- restructuring charges of \$43.4 million in 2015 compared to \$28.4 million in 2014, primarily for severance and other related costs associated with the termination of 411 employees;
- costs from acquired businesses (Axeda, Atego, Thingworx and ColdLight added approximately 360 employees at the date of the acquisitions);
- costs associated with terminating our U.S. Pension Plan which totaled \$73.2 million (including a \$66.3 million settlement loss);
- a litigation accrual of \$28.2 million related to our previously disclosed China investigation; and
- amortization of acquired intangible assets (including amortization of purchased software which is included in cost of revenue), primarily related to our acquisitions in 2014 and 2015, which was higher by \$5.3 million.

These cost increases were partially offset by

- cost savings associated with restructuring actions in 2014 and 2015;
- the impact of foreign currency movements which favorably impacted costs and expenses by \$56.6 million in 2015; and
- a decrease in cash-based incentive compensation of \$18.1 million.

2014 compared to 2013

Costs and expenses in 2014, compared to 2013, decreased primarily as a result of:

- restructuring charges, which were \$23.8 million lower in 2014; and

- cost savings resulting from restructuring actions in 2013.

These cost decreases were offset by:

- costs from acquired businesses (approximately 300 employees);
- investments we made in our Internet of Things business;
- company-wide merit pay increases totaling approximately \$12 million on an annualized basis, which were effective February 1, 2014;
- increased amortization of acquired intangible assets, which was \$5.2 million higher in 2014; and
- increased acquisition-related and pension plan termination costs, which were \$3.2 million higher.

Cost of L&S Revenue

	2015	Percent Change	2014	Percent Change	2013
(Dollar amounts in millions)					
Cost of L&S revenue	\$ 53.2	18%	\$ 45.0	15%	\$ 39.0
% of total revenue	4%		3%		3%
% of total L&S revenue	15%		12%		11%
L&S headcount at end of period	115	55%	74	80%	41

Our cost of L&S revenue primarily consists of amortization of acquired purchased software intangible assets, fixed and variable costs associated with reproducing and distributing software and documentation and royalties paid to third parties for technology embedded in or licensed with our software products. Cost of L&S revenue as a percent of L&S revenue can vary depending on product mix sold, the effect of fixed and variable royalties, and the level of amortization of acquired software intangible assets. Amortization of acquired purchased software totaled \$19.4 million, \$18.1 million and \$18.6 million in 2015, 2014, and 2013, respectively. Costs to perform cloud services were \$19.0 million, \$12.9 million, and \$6.0 million in 2015, 2014, and 2013, respectively. The increase in costs to perform cloud services in 2015 is attributable to our acquisition of Axeda.

Cost of Support Revenue

	2015	Percent Change	2014	Percent Change	2013
(Dollar amounts in millions)					
Cost of support revenue	\$ 82.8	(2)%	\$ 84.7	4%	\$ 81.1
% of total revenue	7%		6%		6%
% of total support revenue	12%		12%		12%
Support headcount at end of period	668	1 %	659	4%	634

Our cost of support revenue includes costs such as salaries, benefits, and computer equipment and facilities associated with customer support and the release of support updates (including related royalty costs).

In 2015 compared to 2014, total compensation, benefit costs and travel expenses were 4% (\$2.7 million) lower.

In 2014 compared to 2013, total compensation, benefit costs and travel expenses were higher by 5% (\$2.8 million). Support headcount at the end of 2014 included approximately 30 employees added from 2014 acquisitions.

Cost of Professional Services Revenue

	2015	Percent Change	2014	Percent Change	2013
(Dollar amounts in millions)					
Cost of professional services revenue	\$ 198.7	(19)%	\$ 244.0	(4)%	\$ 252.9
% of total revenue	16%		18%		20%
% of total professional services revenue	88%		88%		89%
Service headcount at end of period	1,074	(23)%	1,388	4 %	1,336

Our cost of professional services revenue includes costs such as salaries, benefits, and computer equipment and facilities for our training and consulting personnel, and third-party subcontractor fees.

In 2015, compared to 2014, total compensation, benefit costs and travel expenses decreased 21% (\$36.9 million) primarily due to reduced headcount. Additionally, the cost of third-party consulting services was \$7.4 million lower in 2015 compared to 2014.

In 2014 compared to 2013, total compensation, benefit costs and travel expenses were higher by \$0.7 million. Service headcount at the end of 2014 included approximately 40 employees added from 2014 acquisitions. The cost of third-party consulting services was \$6.9 million lower in 2014, compared to 2013.

The decreases in 2015 and 2014, compared to the prior years, in the cost of third-party consulting services is a result of our strategy to have our strategic services partners perform services for customers directly, which has contributed to improving services margins.

Sales and Marketing

	2015	Percent Change	2014	Percent Change	2013
(Dollar amounts in millions)					
Sales and marketing expenses	\$ 338.8	(5)%	\$ 357.4	(1)%	\$ 360.6
% of total revenue	27%		26%		28%
Sales and marketing headcount at end of period	1,416	(4)%	1,481	9 %	1,362

Our sales and marketing expenses primarily include salaries and benefits, sales commissions, advertising and marketing programs, travel and facility costs.

Our compensation, benefit costs and travel expenses were lower by an aggregate of 7% (\$20.3 million) in 2015 compared to 2014, primarily due to lower headcount.

In 2014, compared to 2013, our compensation, benefit costs and travel expenses were flat, which reflects higher commission and salary expense offset by lower benefit costs. Sales and marketing headcount at the end of 2014 included approximately 70 employees added from 2014 acquisitions. In 2014, compared to 2013, total depreciation and telecommunication costs decreased by \$2.5 million.

Research and Development

	2015	Percent Change	2014	Percent Change	2013
(Dollar amounts in millions)					
Research and development expenses	\$ 227.5	— %	\$ 226.5	2%	\$ 221.9
% of total revenue	18%		17%		17%
Research and development headcount at end of period	1,998	(7)%	2,156	8%	2,001

Our research and development expenses consist principally of salaries and benefits, costs of computer equipment and facility expenses. Major research and development activities include developing new releases of our software.

Total compensation, benefit costs and travel expenses were lower by 1% (\$1.9 million) in 2015, compared to 2014. Research and development headcount at the end of 2015 included approximately 20 employees added from 2015 acquisitions.

Total compensation, benefit costs and travel expenses were higher by 3% (\$5.9 million) in 2014, compared to 2013. Headcount in 2014, excluding employees added from 2014 acquisitions, included a higher mix of research and development headcount in lower cost geographic regions as compared to 2013. Additionally, research and development headcount at the end of 2014 included approximately 100 employees added from companies acquired in 2014, primarily added in the fourth quarter of 2014. Total depreciation and telecommunication costs in 2014 decreased by \$1.8 million, compared to 2013.

General and Administrative

	2015	Percent Change	2014	Percent Change	2013
	(Dollar amounts in millions)				
General and administrative	\$ 166.7	17%	\$ 142.2	8%	\$ 131.9
% of total revenue	13%		10%		10%
General and administrative headcount at end of period	711	4%	686	10%	626

Our general and administrative expenses include the costs of our corporate, finance, information technology, human resources, legal and administrative functions, as well as acquisition-related charges, bad debt expense and outside professional services, including accounting and legal fees. Acquisition-related costs include direct costs of acquisitions and expenses related to acquisition integration activities, including transaction fees, due diligence costs, retention bonuses and severance, and professional fees, including legal and accounting costs, related to the acquisition. In addition, subsequent adjustments to our initial estimated amount of contingent consideration associated with specific acquisitions are included in acquisition-related charges. Acquisition-related and pension plan termination-related costs were \$15.8 million, \$13.1 million, and \$9.9 million in 2015, 2014, and 2013, respectively. The increase in overall general and administrative costs in 2015, compared to 2014, was due primarily to a \$28.2 million reserve recorded related to our previously disclosed China investigation. In 2014 compared to 2013, costs for outside professional services including legal, tax, audit and consulting services were higher by \$7.0 million. Cost increases in 2014 were partially offset by certain business taxes in a foreign jurisdiction which were lower by \$1.0 million in 2014 compared to 2013.

U.S. pension settlement loss

	2015	Percent Change	2014	Percent Change	2013
	(Dollar amounts in millions)				
U.S. pension termination loss	\$ 66.3		\$ —		\$ —
% of total revenue	5%		—%		—%

U.S. pension settlement loss reflects the loss recognized in the fourth quarter of 2015 related to the termination of our U.S. pension plan, due to the amortization of actuarial losses previously recorded in equity.

Amortization of Acquired Intangible Assets

	2015	Percent Change	2014	Percent Change	2013
	(Dollar amounts in millions)				
Amortization of acquired intangible assets	\$ 36.1	12%	\$ 32.1	21%	\$ 26.5
% of total revenue	3%		2%		2%

Amortization of acquired intangible assets reflects the amortization of acquired non-product related intangible assets, primarily customer and trademark-related intangible assets, recorded in connection with completed acquisitions. The increase in amortization of acquired intangible assets in 2015 includes our acquisitions of ColdLight in the third quarter of 2015, Axeda and Atego in the fourth quarter of 2014, our acquisition of ThingWorx in the second quarter of 2014 and our acquisitions of Enigma and NetIDEAS in the fourth quarter of 2013.

Restructuring Charges

	2015	2014	2013
	(Dollar amounts in millions)		
Restructuring charges	\$ 43.4	\$ 28.4	\$ 52.2
% of total revenue	3%	2%	4%

In April 2015, we committed to a plan to restructure our global workforce and consolidate select facilities to increase investment in our IoT business and to reduce our cost structure through organizational efficiencies in the face of significant foreign currency depreciation relative to the U.S. Dollar and a more cautious outlook on global macroeconomic conditions. The restructuring actions resulted in charges of \$43.4 million during 2015, including \$1.4 million of facility related charges and \$42.0 million of employee related termination costs, primarily related to termination benefits associated with 411 employees. This reorganization resulted in net annualized expense reductions of approximately \$30 million.

In September 2014, in support of integrating businesses acquired in the prior year and the continued evolution of our business model, we committed to a plan to restructure our workforce and recorded a restructuring charge of \$26.8 million attributable to termination benefits associated with 283 employees which were primarily paid in fiscal 2015. This restructuring action resulted in annualized cost savings of approximately \$30 million. In addition, in 2014 we recorded restructuring charges of \$1.6 million, primarily associated with the completion of the restructuring actions initiated in the fourth quarter of 2013.

In 2013, to improve profitability, we implemented restructuring actions and recorded restructuring charges of \$52.2 million, including \$50.9 million for severance and related costs associated with approximately 550 employees and \$1.3 million related to facility consolidations. These restructuring actions were substantially completed in 2013 and resulted in \$16 million per quarter reduction in operating expenses (which was reflected in our results for 2014).

In 2015, 2014, and 2013, we made cash payments related to restructuring charges of \$53.6 million, \$20.6 million, and \$37.2 million, respectively. At September 30, 2015, accrued expenses for unpaid restructuring charges totaled \$15.3 million, which we expect to pay within the next twelve months.

Non-Operating Income (Expense)

	2015	2014	2013
	(Dollar amounts in millions)		
Foreign currency losses, net	\$ (2.7)	\$ (4.5)	\$ (2.0)
Interest income	3.7	3.1	2.9
Interest expense	(14.7)	(8.2)	(7.0)
Other income (expense), net	(1.3)	(1.0)	5.0
	\$ (15.1)	\$ (10.5)	\$ (1.1)

Foreign Currency Net Losses: Foreign currency net losses include costs of hedging contracts, certain realized and unrealized foreign currency transaction gains or losses, and foreign exchange gains or losses resulting from the required period-end currency re-measurement of the assets and liabilities of our subsidiaries that use the U.S. dollar as their functional currency. Because a large portion of our revenue and expenses is transacted in foreign currencies, we engage in hedging transactions involving the use of foreign currency forward contracts to reduce our exposure to fluctuations in foreign exchange rates.

Interest Income: Interest income represents earnings on the investment of our available cash balances and interest on financing provided to customers as described in Note B *Summary of Significant Accounting Policies* of "Notes to Consolidated Financial Statements" in this Annual Report.

Interest Expense: Interest expense is primarily related to interest on borrowings under our credit facility. The increase in interest expense in 2015 from 2014 and 2013 is due to higher average amounts outstanding under our credit facility. We had \$668 million outstanding under the credit facility at September 30, 2015, compared to \$612 million at September 30, 2014 (including \$295 million borrowed in the fourth quarter of 2014 to fund our acquisition of Axeda and to fund an accelerated share repurchase program) and \$258 million at September 30, 2013. The balance outstanding at September 30, 2015 reflects amounts borrowed in 2015 as a result of our acquisition of ColdLight. The average interest rate on amounts outstanding under the credit facility was 1.7% in 2015, 1.6% in 2014 and 1.7% in 2013.

Other Income (Expense), Net: The change in other income (expense), net in 2013 compared to 2014 and 2015, was due primarily to a legal settlement gain of \$5.1 million recorded in 2013.

	Year ended September 30,		
	2015	2014	2013
	(in millions)		
Pre-tax income	\$ 26.5	\$ 186.1	\$ 126.2
Tax (benefit) provision	(21.0)	25.9	(17.5)
Effective income tax rate	(79)%	14%	(14)%

In 2015, our effective tax rate was lower than the 35% statutory federal income tax rate due, in large part, to our corporate structure in which our foreign taxes are at an effective tax rate lower than the U.S. A significant amount of our foreign earnings is generated by our subsidiaries organized in Ireland. In 2015, 2014 and 2013, the foreign rate differential predominantly relates to these Irish earnings. Our foreign rate differential in 2015 includes a rate benefit from a business realignment completed on September 30, 2014 in which intellectual property was transferred between two wholly-owned foreign subsidiaries. The realignment allows us to more efficiently manage the distribution of our products to European customers. In 2015, this realignment resulted in a tax benefit of approximately \$24.0 million. We expect this realignment to result in an annual tax benefit of approximately \$15 million to \$20 million for the next several years, declining annually thereafter through 2021. U.S. permanent items include the tax effect of a \$14.5 million expense related to a pending legal settlement. Other factors impacting the effective tax rate include: the release of a valuation allowance totaling \$18.7 million relating to the U.S. pension plan termination, foreign withholding taxes of \$3.8 million, a tax benefit of \$3.1 million relating to the reassessment of our reserve requirements and a benefit of \$1.4 million in conjunction with the reorganization of our Atego U.S. subsidiaries. Additionally, our provision reflects a \$2.1 million tax benefit related to a retroactive extension of the U.S. research and development tax credit enacted in the first quarter of 2015. This benefit was offset by a corresponding provision to increase our U.S. valuation allowance.

In 2014, our effective tax rate was lower than the 35% statutory federal income tax rate due to our corporate structure in which our foreign taxes are at a net effective tax rate lower than the U.S. rate and the reversal of a portion of our valuation allowance against net deferred tax assets described below. Other factors impacting the rate include foreign withholding taxes of \$5.1 million and the establishment of a valuation allowance totaling \$3.5 million in two foreign subsidiaries.

In 2013, our effective tax rate was lower than the 35% statutory federal income tax rate due, in large part, to the reversal of a portion of the valuation allowance against deferred tax assets (primarily the U.S.). We recorded benefits resulting from 2013 acquisitions as described below, and a benefit of \$7.9 million related to the release of a valuation allowance as a result of a pension gain recorded in accumulated other comprehensive income in equity. Additionally, our 2013 tax provision reflected a \$2.0 million provision related to a research and development (R&D) cost sharing prepayment by a foreign subsidiary to the U.S. A similar prepayment was made in 2012, resulting in a \$7.8 million provision in that year. This impact was offset by a corresponding increase in our valuation allowance in the U.S. Other factors impacting the rate include our corporate structure in which our foreign taxes are at an effective tax rate lower than the U.S. rate, foreign withholding taxes of \$6.0 million and non-cash tax benefits of \$5.3 million recorded as a result of the conclusion of tax audits in several foreign jurisdictions.

Acquisitions in 2014 and 2013 were accounted for as business combinations. Assets acquired, including the fair value of acquired tangible assets, intangible assets and assumed liabilities were recorded, and we recorded net deferred tax liabilities of \$21.6 million and \$38.7 million in 2014 and 2013, respectively, primarily related to the tax effect of the acquired intangible assets that are not deductible for income tax purposes. These deferred tax liabilities reduced our net deferred tax asset balance and resulted in a tax benefit of \$18.1 million and \$36.7 million in 2014 and 2013, respectively, to decrease our valuation allowance in jurisdictions where we have recorded a valuation allowance. As these decreases in the valuation allowance are not part of the accounting for business combinations (the fair value of the assets acquired and liabilities assumed), they were recorded as an income tax benefit.

We have concluded, based on the weight of available evidence, that a full valuation allowance continues to be required against our U.S. net deferred tax assets as they are not more likely than not to be realized in the future. We will continue to reassess whether a valuation allowance is required each financial reporting period.

In the normal course of business, PTC and its subsidiaries are examined by various taxing authorities, including the Internal Revenue Service (IRS) in the United States. We regularly assess the likelihood of additional assessments by tax authorities and provide for these matters as appropriate. We are currently under audit by tax authorities in several jurisdictions. Audits by tax authorities typically involve examination of the deductibility of certain permanent items, limitations on net operating losses and tax credits. Although we believe our tax estimates are appropriate, the final determination of tax audits and any related litigation could result in material changes in our estimates.

Our future effective income tax rate may be materially impacted by the amount of income taxes associated with our foreign earnings, which are taxed at rates different from the U.S. federal statutory income tax rate, as well as the timing and extent of the realization of deferred tax assets and changes in the tax law. Further, our tax rate may fluctuate within a fiscal year, including from quarter to quarter, due to items arising from discrete events, including settlements of tax audits and assessments, the resolution or identification of tax position uncertainties, and acquisitions of other companies.

Non-GAAP Measures

The non-GAAP measures presented in the above discussion of our results of operations and the respective most directly comparable GAAP measures are:

- non-GAAP revenue—GAAP revenue
- non-GAAP gross margin—GAAP gross margin
- non-GAAP operating income—GAAP operating income
- non-GAAP operating margin—GAAP operating margin
- non-GAAP net income—GAAP net income (loss)
- non-GAAP diluted earnings per share—GAAP diluted earnings (loss) per share

The non-GAAP measures exclude fair value adjustments related to acquired deferred revenue, acquired deferred costs, stock-based compensation expense, amortization of acquired intangible assets expense, acquisition-related charges, restructuring charges, pension plan termination-related costs, identified discrete items included in non-operating other income (expense), net and the related tax effects of the preceding items, and any other identified tax items. These items are normally included in the comparable measures calculated and presented in accordance with GAAP.

Fair value of acquired deferred revenue is a purchase accounting adjustment recorded to reduce acquired deferred revenue to the fair value of the remaining obligation.

Stock-based compensation expense is non-cash expense relating to stock-based awards issued to executive officers, employees and outside directors, consisting of restricted stock, stock options and restricted stock units.

Amortization of acquired intangible assets expense is a non-cash expense that is impacted by the timing and magnitude of our acquisitions. We believe the assessment of our operations excluding these costs is relevant to our assessment of internal operations and comparisons to the performance of other companies in our industry.

Acquisition-related charges included in general and administrative expenses include direct costs of potential and completed acquisitions and expenses related to acquisition integration activities, including transaction fees, due diligence costs, severance and professional fees. In addition, subsequent adjustments to our initial estimated amount of contingent consideration associated with specific acquisitions are included within acquisition-related charges. These costs are not considered part of our normal operations as the occurrence and amount will vary depending on the timing and size of acquisitions.

U.S. pension plan termination-related costs include charges related to our plan that we began terminating in the second quarter of 2014. Costs associated with the termination are not considered part of our ongoing operations.

Pending legal settlement accrual includes amounts related to the China matter described in *Impact of an Investigation in China*.

Restructuring charges include excess facility restructuring charges and severance costs resulting from reductions of personnel driven by modifications to our business strategy and not as part of our normal operations. These costs may vary in size based on our restructuring plan.

We use these non-GAAP measures, and we believe that they assist our investors, to make period-to-period comparisons of our operational performance because they provide a view of our operating results without items that are not, in our view, indicative of our core operating results. We believe that these non-GAAP measures help illustrate underlying trends in our business, and we use the measures to establish budgets and operational goals, communicated internally and externally, for managing our business and evaluating our performance. We believe that providing non-GAAP measures affords investors a view of our operating results that may be more easily compared to the results of peer companies. In addition, compensation of our executives is based in part on the performance of our business based on these non-GAAP measures.

The items excluded from the non-GAAP measures often have a material impact on our financial results and such items often recur. Accordingly, the non-GAAP measures included in this Annual Report should be considered in addition to, and not as a substitute for or superior to, the comparable measures prepared in accordance with GAAP.

The following tables reconcile each of these non-GAAP measures to its most closely comparable GAAP measure on our financial statements.

	Year ended September 30,		
	2015	2014	2013
	(Dollar amounts in millions)		
GAAP revenue	\$ 1,255.2	\$ 1,357.0	\$ 1,293.5
Fair value of acquired deferred revenue	3.9	1.2	3.0
Non-GAAP revenue	<u>\$ 1,259.1</u>	<u>\$ 1,358.2</u>	<u>\$ 1,296.5</u>
GAAP gross margin	\$ 920.5	\$ 983.3	\$ 920.5
Fair value of acquired deferred revenue	3.9	1.2	3.0
Fair value adjustment to acquired deferred costs	(0.5)	(0.1)	—
Stock-based compensation	10.2	10.4	9.5
Amortization of acquired intangible assets included in cost of revenue	19.4	18.1	18.6
Non-GAAP gross margin	<u>\$ 953.4</u>	<u>\$ 1,013.0</u>	<u>\$ 951.6</u>
GAAP operating income	\$ 41.6	\$ 196.6	\$ 127.3
Fair value of acquired deferred revenue	3.9	1.2	3.0
Fair value adjustment to acquired deferred costs	(0.5)	(0.2)	—
Stock-based compensation	50.2	50.9	48.8
Amortization of acquired intangible assets	55.5	50.2	45.1
Acquisition-related charges included in general and administrative expenses	8.9	12.7	9.9
U.S. pension plan termination-related costs (1)	73.2	0.4	—
Pending legal settlement accrual	28.2	—	—
Restructuring charges	43.4	28.4	52.2
Non-GAAP operating income	<u>\$ 304.3</u>	<u>\$ 340.3</u>	<u>\$ 286.3</u>
GAAP net income	\$ 47.6	\$ 160.2	\$ 143.8
Fair value of acquired deferred revenue	3.9	1.2	3.0
Fair value adjustment to acquired deferred costs	(0.5)	(0.2)	—
Stock-based compensation	50.2	50.9	48.8
Amortization of acquired intangible assets	55.5	50.2	45.1
Acquisition-related charges included in general and administrative expenses	8.9	12.7	9.9
U.S. pension plan termination-related costs (1)	73.2	0.4	—
Pending legal settlement accrual	28.2	—	—
Restructuring charges	43.4	28.4	52.2
Non-operating (gain) loss (2)	—	—	(5.7)
Income tax adjustments (3)	(51.1)	(43.5)	(77.8)
Non-GAAP net income	<u>\$ 259.2</u>	<u>\$ 260.4</u>	<u>\$ 219.2</u>
GAAP diluted earnings (loss) per share	\$ 0.41	\$ 1.34	\$ 1.19
Stock-based compensation	0.43	0.42	0.40
Amortization of acquired intangible assets	0.48	0.42	0.37
Restructuring charges	0.37	0.24	0.43
Acquisition-related charges included in general and administrative expenses	0.08	0.11	0.08
U.S. pension plan termination-related costs	0.63	—	—
Pending legal settlement accrual	0.24	—	—
Non-operating (gain) loss	—	—	(0.05)
Income tax adjustments (3)	(0.44)	(0.36)	(0.64)

Fair value of acquired deferred revenue	0.03	0.01	0.03
Non-GAAP diluted earnings per share (4)	\$ 2.23	\$ 2.17	\$ 1.81
Operating margin impact of non-GAAP adjustments:			
GAAP operating margin	3.3%	14.5%	9.8%
Fair value of acquired deferred revenue	0.3%	0.1%	0.2%
Stock-based compensation	4.0%	3.8%	3.8%
Amortization of acquired intangible assets	4.4%	3.7%	3.5%
Acquisition-related charges included in general and administrative expenses	0.7%	0.9%	0.8%
U.S. pension plan termination-related costs	5.8%	—%	—%
Pending legal settlement accrual	2.2%	—%	—%
Restructuring charges	3.5%	2.1%	4.0%
Non-GAAP operating margin	24.2%	25.1%	22.1%

- (1) Represents charges related to terminating a U.S. pension plan including a settlement loss of \$66.3 million in 2015.
- (2) *Non-operating gain (loss) adjustments*: In 2013, we recorded a \$0.6 million gain on an investment related to an acquisition and a legal settlement gain of \$5.1 million.
- (3) *Income tax adjustments* reflect the tax effects of non-GAAP adjustments which are calculated by applying the applicable tax rate by jurisdiction to the non-GAAP adjustments listed above, and also include any identified tax items. In the fourth quarter of 2012, a valuation allowance was established against our U.S. net deferred tax assets and in the fourth quarter of 2014 a valuation allowance was established against net deferred tax assets in two foreign jurisdictions. As the U.S. is profitable on a non-GAAP basis, the non-GAAP tax provision is being calculated assuming there is no U.S. valuation allowance. Additionally, the following identified tax items have been excluded from the non-GAAP tax results. The GAAP diluted earnings per share in 2015 includes an \$18.7 million release of valuation allowance related to the U.S. pension plan termination. GAAP diluted earnings per share in 2014 includes (i) tax benefits of \$18.1 million related to the release of a portion of the valuation allowance as a result of deferred tax liabilities established for acquisitions recorded in 2014 and (ii) a tax charge of \$3.5 million to establish a valuation allowance against net deferred tax assets in two foreign jurisdictions. GAAP diluted earnings per share in 2013 includes (i) tax benefits of \$36.7 million related to the release of a portion of the valuation allowance as a result of deferred tax liabilities established for acquisitions recorded in 2013, (ii) tax benefits of \$3.2 million relating to the final resolution of a long standing tax litigation matter and completion of an international jurisdiction tax audit, (iii) a tax benefit of \$7.9 million related to the release of a portion of the valuation allowance in the U.S. as a result of a pension gain (decrease in unrecognized actuarial loss) recorded in accumulated other comprehensive income and (iv) a tax benefit of \$2.6 million relating to a tax audit in a foreign jurisdiction of an acquired company.
- (4) Diluted earnings per share impact of non-GAAP adjustments is calculated by dividing the dollar amount of the non-GAAP adjustment by the diluted weighted average shares outstanding for the respective year.

Critical Accounting Policies and Estimates

We have prepared our consolidated financial statements in accordance with accounting principles generally accepted in the United States of America. In preparing our financial statements, we make estimates, assumptions and judgments that can have a significant impact on our reported revenues, results of operations, and net income, as well as on the value of certain assets and liabilities on our balance sheet. These estimates, assumptions and judgments are necessary because future events and their effects on our results and the value of our assets cannot be determined with certainty, and are made based on our historical experience and on other assumptions that we believe to be reasonable under the circumstances. These estimates may change as new events occur or additional information is obtained, and we may periodically be faced with uncertainties, the outcomes of which are not within our control and may not be known for a prolonged period of time.

The accounting policies, methods and estimates used to prepare our financial statements are described generally in Note B *Summary of Significant Accounting Policies* of "Notes to Consolidated Financial Statements" in this Annual Report. The most important accounting judgments and estimates that we made in preparing the financial statements involved:

- revenue recognition;
- accounting for income taxes;
- valuation of assets and liabilities acquired in business combinations;
- valuation of goodwill;
- accounting for pensions; and

- legal contingencies.

A critical accounting policy is one that is both material to the presentation of our financial statements and requires us to make subjective or complex judgments that could have a material effect on our financial condition and results of operations. Critical accounting policies require us to make assumptions about matters that are uncertain at the time of the estimate, and different estimates that we could have used, or changes in the estimates that are reasonably likely to occur, may have a material impact on our financial condition or results of operations. Because the use of estimates is inherent in the financial reporting process, actual results could differ from those estimates.

Accounting policies, guidelines and interpretations related to our critical accounting policies and estimates are generally subject to numerous sources of authoritative guidance and are often reexamined by accounting standards rule makers and regulators. These rule makers and/or regulators may promulgate interpretations, guidance or regulations that may result in changes to our accounting policies, which could have a material impact on our financial position and results of operations.

Revenue Recognition

Our sources of revenue include: (1) license and subscription, (2) support and (3) professional services. We record revenues in accordance with the guidance provided by ASC 985-605, *Software-Revenue Recognition* when the following criteria are met: (1) persuasive evidence of an arrangement exists, (2) delivery has occurred (generally, FOB shipping point or electronic distribution), (3) the fee is fixed or determinable, and (4) collection is probable. We exercise judgment and use estimates in connection with determining the amounts of software license and services revenues to be recognized in each accounting period. Our primary judgments involve the following:

- determining whether collection is probable;
- assessing whether the fee is fixed or determinable;
- determining whether service arrangements, including modifications and customization of the underlying software, are not essential to the functionality of the licensed software and thus would result in the revenue for license and service elements of an agreement being recorded separately; and
- determining the fair value of services and support elements included in multiple-element arrangements, which is the basis for allocating and deferring revenue for such services and support.

Our software is distributed primarily through our direct sales force. In addition, we have an indirect distribution channel through alliances with resellers. Revenue arrangements with resellers are recognized on a sell-through basis; that is, when we deliver the product to the end-user customer. We record consideration given to a reseller as a reduction of revenue to the extent we have recorded revenue from the reseller. We do not offer contractual rights of return, stock balancing, or price protection to our resellers, and actual product returns from them have been insignificant to date. As a result, we do not maintain reserves for reseller product returns.

At the time of each sale transaction, we must make an assessment of the collectability of the amount due from the customer. Revenue is only recognized at that time if management deems that collection is probable. In making this assessment, we consider customer credit-worthiness and historical payment experience. At that same time, we assess whether fees are fixed or determinable and free of contingencies or significant uncertainties. In assessing whether the fee is fixed or determinable, we consider the payment terms of the transaction, including transactions with payment terms that extend beyond our customary payment terms, and our collection experience in similar transactions without making concessions, among other factors. We have periodically provided financing to credit-worthy customers with payment terms up to 24 months. If the fee is determined not to be fixed or determinable, revenue is recognized only as payments become due from the customer, provided that all other revenue recognition criteria are met. Our software license arrangements generally do not include customer acceptance provisions. However, if an arrangement includes an acceptance provision, we record revenue only upon the earlier of (1) receipt of written acceptance from the customer or (2) expiration of the acceptance period.

Generally, our contracts are accounted for individually. However, when contracts are closely interrelated and dependent on each other, it may be necessary to account for two or more contracts as one to reflect the substance of the group of contracts.

License and Subscription

License and subscription (L&S) revenue includes revenue from three primary sources: (1) sales of perpetual licenses, (2) subscription-based licenses, and (3) cloud services.

Under perpetual license arrangements, we generally recognize license revenue up front upon shipment to the customer. We use the residual method to recognize revenue from perpetual license software arrangements that include one or more elements to be delivered at a future date when evidence of the fair value of all undelivered elements exists, and the elements of the arrangement qualify for separate accounting as described below. Under the residual method, the fair value of the

undelivered elements (i.e., support and services) based on our vendor-specific objective evidence (“VSOE”) of fair value is deferred and the remaining portion of the total arrangement fee is allocated to the delivered elements (i.e., perpetual software license). If evidence of the fair value of one or more of the undelivered elements does not exist, all revenues are deferred and recognized when delivery of all of those elements has occurred or when fair values can be established. We determine VSOE of the fair value of services and support revenue based upon our recent pricing for those elements when sold separately. For certain transactions, VSOE is determined based on a substantive renewal clause within a customer contract. Our current pricing practices are influenced primarily by product type, purchase volume, sales channel and customer location. We review services and support sold separately on a periodic basis and update, when appropriate, our VSOE of fair value for such elements to ensure that it reflects our recent pricing experience.

Subscription-based licenses include the right for a customer to use our licenses and receive related support for a specified term and revenue is recognized ratably over the term of the arrangement. When sold in arrangements with other elements, VSOE of fair value is established for the subscription-based licenses through the use of a substantive renewal clause within the customer contract for a combined annual fee that includes the term-based license and related support.

Cloud services reflect recurring revenues that include fees for hosting and application management of customers’ perpetual or subscription-based licenses. Generally, customers have the right to terminate the cloud services contract and take possession of the licenses without a significant penalty. When cloud services are sold as part of a multi-element transaction, revenue is allocated to cloud services based on VSOE, and recognized ratably over the contractual term beginning on the commencement dates of each contract, which is the date the services are made available to the customer. VSOE is established for cloud services either through a substantive stated renewal option or stated contractual overage rates, as these rates represent the value the customer is willing to pay on a standalone basis. In addition, cloud services include set-up fees, which are recognized ratably over the contract term or the expected customer life, whichever is longer.

Support

Support contracts generally include rights to unspecified upgrades (when and if available), telephone and internet-based support, updates and bug fixes. Support revenue is recognized ratably over the term of the support contract on a straight-line basis.

Professional Services

Our software arrangements often include implementation, consulting and training services that are sold under consulting engagement contracts or as part of the software license arrangement. When we determine that such services are not essential to the functionality of the licensed software, we record revenue separately for the license and service elements of these arrangements, provided that appropriate evidence of fair value exists for the undelivered services (i.e. VSOE of fair value). We consider various factors in assessing whether a service is not essential to the functionality of the software, including if the services may be provided by independent third parties experienced in providing such services (i.e. consulting and implementation) in coordination with dedicated customer personnel, and whether the services result in significant modification or customization of the software’s functionality. When professional services qualify for separate accounting, professional services revenues under time and materials billing arrangements are recognized as the services are performed. Professional services revenues under fixed-priced contracts are generally recognized as the services are performed using a proportionate performance model with hours or costs as the input method of attribution.

When we provide professional services that are considered essential to the functionality of the software, the arrangement does not qualify for separate accounting of the license and service elements, and the license revenue is recognized together with the consulting services using the percentage-of-completion method of contract accounting. Under such arrangements, consideration is recognized as the services are performed as measured by an observable input. In these circumstances, we separate license revenue from service revenue for income statement presentation by allocating VSOE of fair value of the consulting services as service revenue, and the residual portion as license revenue. Under the percentage-of-completion method, we estimate the stage of completion of contracts with fixed or “not to exceed” fees based on hours or costs incurred to date as compared with estimated total project hours or costs at completion. Adjustments to estimates to complete are made in the periods in which facts resulting in a change become known. When total cost estimates exceed revenues, we accrue for the estimated losses when identified. The use of the proportionate performance and percentage-of-completion methods of accounting require significant judgment relative to estimating total contract costs or hours (hours being a proxy for costs), including assumptions relative to the length of time to complete the project, the nature and complexity of the work to be performed and anticipated changes in salaries and other costs.

Reimbursements of out-of-pocket expenditures incurred in connection with providing consulting services are included in service revenue, with the offsetting expense recorded in cost of service revenue.

Training services include on-site and classroom training. Training revenues are recognized as the related training services are provided.

Accounting for Income Taxes

As part of the process of preparing our consolidated financial statements, we are required to calculate our income tax expense based on taxable income by jurisdiction. There are many transactions and calculations about which the ultimate tax outcome is uncertain; as a result, our calculations involve estimates by management. Some of these uncertainties arise as a consequence of revenue-sharing, cost-reimbursement and transfer pricing arrangements among related entities and the differing tax treatment of revenue and cost items across various jurisdictions. If we were compelled to revise or to account differently for our arrangements, that revision could affect our tax liability.

The income tax accounting process also involves estimating our actual current tax liability, together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheets. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income and, to the extent we believe that it is more likely than not that all or a portion of our deferred tax assets will not be realized, we must establish a valuation allowance as a charge to income tax expense.

As of September 30, 2015, we have a valuation allowance of \$166.5 million against net deferred tax assets in the U.S. and a valuation allowance of \$31.7 million against net deferred tax assets in certain foreign jurisdictions. We have concluded, based on the weight of available evidence, that a full valuation allowance continues to be required against our U.S. net deferred tax assets as they are not more likely than not to be realized in the future. We will continue to reassess our valuation allowance requirements each financial reporting period.

The valuation allowance recorded against net deferred tax assets of certain foreign jurisdictions is established primarily for our net operating loss carryforwards, the majority of which do not expire. There are limitations imposed on the utilization of such net operating losses that could further restrict the recognition of any tax benefits.

We have not provided for U.S. income taxes or foreign withholding taxes on foreign unrepatriated earnings as it is our current intention to permanently reinvest these earnings outside the U.S. unless it can be done with no significant tax cost, with the exception of a newly formed foreign holding company. There was no impact to this assertion in the current year. In the future, we expect to incur annual deferred tax expense of \$11 million. If we decide to change this assertion in the future to repatriate any additional non-U.S. earnings, we may be required to establish a deferred tax liability on such earnings. The cumulative amount of undistributed earnings of our subsidiaries for which U.S. income taxes have not been provided totaled approximately \$1,915 million and \$613 million as of September 30, 2015 and 2014, respectively. In 2015, we reorganized certain European entities to simplify our legal and reporting structure. This reorganization resulted in a transfer of assets between subsidiaries and triggered a gain that resulted in an increase in unremitted earnings. The amount of unrecognized deferred tax liability on the undistributed earnings cannot be practicably determined at this time.

In the normal course of business, PTC and its subsidiaries are examined by various taxing authorities, including the Internal Revenue Service (IRS) in the United States. We regularly assess the likelihood of additional assessments by tax authorities and provide for these matters as appropriate. We are currently under audit by tax authorities in several jurisdictions. Audits by tax authorities typically involve examination of the deductibility of certain permanent items, limitations on net operating losses and tax credits. Although we believe our tax estimates are appropriate, the final determination of tax audits and any related litigation could result in material changes in our estimates.

Valuation of Assets and Liabilities Acquired in Business Combinations

In accordance with business combination accounting, we allocate the purchase price of acquired companies to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. Determining these fair values requires management to make significant estimates and assumptions, especially with respect to intangible assets.

Our identifiable intangible assets acquired consist of developed technology, core technology, tradenames, customer lists and contracts, and software support agreements and related relationships. Developed technology consists of products that have reached technological feasibility. Core technology represents a combination of processes, inventions and trade secrets related to the design and development of acquired products. Customer lists and contracts and software support agreements and related relationships represent the underlying relationships and agreements with customers of the acquired company's installed base. We have generally valued intangible assets using a discounted cash flow model. Critical estimates in valuing certain of the intangible assets include but are not limited to:

- future expected cash flows from software license sales, customer support agreements, customer contracts and related customer relationships and acquired developed technologies and trademarks and trade names;
- expected costs to develop the in-process research and development into commercially viable products and estimating cash flows from the projects when completed;

- the acquired company's brand awareness and market position, as well as assumptions about the period of time the acquired brand will continue to be used by the combined company; and
- discount rates used to determine the present value of estimated future cash flows.

In addition, we estimate the useful lives of our intangible assets based upon the expected period over which we anticipate generating economic benefits from the related intangible asset.

Net tangible assets consist of the fair values of tangible assets less the fair values of assumed liabilities and obligations. Except for deferred revenues, net tangible assets were generally valued by us at the respective carrying amounts recorded by the acquired company, if we believed that their carrying values approximated their fair values at the acquisition date. The values assigned to deferred revenue reflect an amount equivalent to the estimated cost plus an appropriate profit margin to perform the services related to the acquired company's software support contracts.

In addition, uncertain tax positions and tax related valuation allowances assumed in connection with a business combination are initially estimated as of the acquisition date and we reevaluate these items quarterly with any adjustments to our preliminary estimates being recorded to goodwill provided that we are within the measurement period (up to one year from the acquisition date) and we continue to collect information in order to determine their estimated values. Subsequent to the measurement period or our final determination of the estimated value of uncertain tax positions or tax related valuation allowances, whichever comes first, changes to these uncertain tax positions and tax related valuation allowances will affect our provision for income taxes in our Consolidated Statements of Operations.

Our estimates of fair value are based upon assumptions believed to be reasonable at that time, but which are inherently uncertain and unpredictable. Assumptions may be incomplete or inaccurate, and unanticipated events and circumstances may occur, which may affect the accuracy or validity of such assumptions, estimates or actual results.

When events or changes in circumstances indicate that the carrying value of a finite-lived intangible asset may not be recoverable, we perform an assessment of the asset for potential impairment. This assessment is based on projected undiscounted future cash flows over the asset's remaining life. If the carrying value of the asset exceeds its undiscounted cash flows, we record an impairment loss equal to the excess of the carrying value over the fair value of the asset, determined using projected discounted future cash flows of the asset.

Valuation of Goodwill

Our goodwill totaled \$1,069.0 million and \$1,012.5 million as of September 30, 2015 and 2014, respectively. We have two operating segments: (1) Software Products and (2) Services. We assess goodwill for impairment at the reporting unit level. Our reporting units are determined based on the components of our operating segments that constitute a business for which discrete financial information is available and for which operating results are regularly reviewed by segment management. Our reporting units are consistent with our operating segments. As of September 30, 2015 and 2014, goodwill and acquired intangible assets in the aggregate attributable to our software products reportable segment was \$1,297.9 million and \$1,283.0 million, respectively, and attributable to our services reportable segment was \$62.4 million and \$66.4 million, respectively. We test goodwill for impairment in the third quarter of our fiscal year, or on an interim basis if an event occurs or circumstances change that would, more likely than not, reduce the fair value of a reporting segment below its carrying value. Factors we consider important (on an overall company basis and reportable segment basis, as applicable) that could trigger an impairment review include significant underperformance relative to historical or projected future operating results, significant changes in our use of the acquired assets or a significant change in the strategy for our business, significant negative industry or economic trends, a significant decline in our stock price for a sustained period, or a reduction of our market capitalization relative to net book value.

We completed our annual goodwill impairment review as of July 4, 2015 and concluded that no impairment charge was required as of that date. To conduct our test of goodwill, the fair value of each reporting unit is compared to its carrying value. If the reporting unit's carrying value exceeds its fair value, we record an impairment loss equal to the difference between the carrying value of goodwill and its implied fair value. We estimate the fair values of our reporting units using discounted cash flow valuation models. Those models require estimates of future revenues, profits, capital expenditures, working capital, terminal values based on revenue multiples, and discount rates for each reporting unit. We estimate these amounts by evaluating historical trends, current budgets, operating plans and industry data. The estimated fair value of each reporting unit was more than double its carrying value as of July 4, 2015.

Accounting for Pensions

We sponsor several international pension plans. We make assumptions that are used in calculating the expense and liability of these plans. These key assumptions include the expected long-term rate of return on plan assets and the discount rate

used to determine the present value of benefit obligations. In selecting the expected long-term rate of return on assets, we consider the average future rate of earnings expected on the funds invested to provide for the benefits under the pension plan. This includes considering the plans' asset allocations and the expected returns likely to be earned over the life of the plans. The discount rate reflects the estimated rate at which an amount that is invested in a portfolio of high-quality debt instruments would provide the future cash flows necessary to pay benefits when they come due. The actuarial assumptions used by us may differ materially from actual results due to changing market and economic conditions or longer or shorter life spans of the participants. Our actual results could differ materially from those we estimated, which could require us to record a greater amount of pension expense in future years and/or require higher than expected cash contributions.

We previously maintained a U.S. defined benefit pension plan (the Plan) that covered certain persons who were employees of Computervision Corporation (acquired by us in 1998). Benefits under the Plan were frozen in 1990. In the second quarter of 2014, we began the process of terminating the Plan, and we completed the plan termination in the fourth quarter of 2015. As of September 30, 2014, we valued the projected benefit obligations of the U.S. Plan based on the present value of estimated costs to settle the liabilities through a combination of lump sum payments to participants and purchasing annuities from an insurance company. This reflected an estimate of how many participants we expected will accept a lump sum offering, and an estimate of lump sum payouts for those participants. Liabilities expected to be settled through annuity contracts were estimated based on future benefit payments, discounted based on current interest rates that correspond to the liability payouts, adjusted to reflect a premium that would be assessed by the insurer.

We settled the liabilities in 2015 and recognized a settlement loss of \$66.3 million based on the projected benefit obligations and assets measured as of the dates the settlements occurred. In the fourth quarter of 2015, we contributed \$25 million to fully fund the Plan.

In determining our U.S. pension cost for 2015, 2014, and 2013, we used a discount rate of 3.80%, 4.90% and 4.00%, respectively, and an expected return on plan assets of 1.35% for 2015, 7.25% for 2014 and 2013. The decrease in the expected return in 2015 was because assets were moved to fixed income security, in anticipation of terminating the U.S. pension plan.

Certain of our international subsidiaries (principally Germany) also sponsor pension plans. Accounting and reporting for these plans requires the use of country-specific assumptions for discount rates and expected rates of return on assets. We apply a consistent methodology in determining the key assumptions that, in addition to future experience assumptions such as mortality rates, are used by our actuaries to determine our liability and expense for each of these plans. The discount rate for Germany was selected with reference to a spot-rate yield curve based on the yields of AA-rated Euro-denominated corporate bonds. In addition, our actuarial consultants determine the expense and liabilities of the plan using other assumptions for future experience, such as mortality rates. In determining our pension cost for 2015, 2014, and 2013, we used weighted average discount rates of 2.4%, 3.3% and 3.4%, respectively, and weighted average expected returns on plan assets of 5.8%, 5.7% and 5.4%, respectively. In 2015, 2014 and 2013, our actual return on plan assets for all plans was \$1.9 million, \$15.9 million and \$13.6 million, respectively. If actual returns are below our expected rates of return, it will impact the amount and timing of future contributions and expense for these plans.

As of September 30, 2015 and 2014, our plans in total were underfunded, representing the difference between our projected benefit obligation and fair value of plan assets, by \$20.2 million and \$61.2 million, respectively. The projected benefit obligation as of September 30, 2015 was determined using a weighted average discount rate of 2.2% for our international plans. The most sensitive assumptions used in calculating the expense and liability of our pension plans are the discount rate and the expected return on plan assets. Total GAAP net periodic pension cost was \$73.9 million in 2015, including a \$66.3 million settlement loss related to the U.S. Plan termination, and we expect it to be approximately \$2 million in 2016. A 50 basis point change to our discount rate and expected return on plan assets assumptions would have changed our pension expense for the year ended September 30, 2015 by approximately \$1 million. A 50 basis point decrease in our discount rate assumptions would increase our projected benefit obligation as of September 30, 2015 by approximately \$7 million.

Legal Contingencies

We are periodically subject to various legal claims and involved in various legal proceedings. We routinely review the status of each significant matter and assess our potential financial exposure. If the potential loss from any matter is considered probable and the amount can be reasonably estimated, we record a liability for the estimated loss. Significant judgment is required in both the determination of probability and the determination as to whether the amount of an exposure is reasonably estimable. Because of inherent uncertainties related to these legal matters, we base our loss accruals on the best information available at the time. Further, estimates of this nature are highly subjective, and the final outcome of these matters could vary significantly from the amounts that have been included in the accompanying Consolidated Financial Statements. As additional information becomes available, we reassess our potential liability and may revise our estimates. Such revisions could have a material impact on future quarterly or annual results of operations.

Liquidity and Capital Resources

	September 30,		
	2015	2014	2013
	(in thousands)		
Cash and cash equivalents	\$ 273,417	\$ 293,654	\$ 241,913
Activity for the year included the following:			
Cash provided by operating activities	\$ 179,903	\$ 304,552	\$ 224,683
Cash used by investing activities	(140,039)	(348,800)	(274,450)
Cash provided (used) by financing activities	(42,155)	105,353	(196,524)

We invest our cash with highly rated financial institutions and in diversified domestic and international money market mutual funds. The portfolio is invested in short-term instruments to ensure cash is available to meet requirements as needed. At September 30, 2015, cash and cash equivalents totaled \$273.4 million, down from \$293.7 million at September 30, 2014, reflecting \$179.9 million in operating cash flow, \$56.3 million of net amounts borrowed under our credit facility (\$100 million borrowed in the third quarter of 2015 as a result of our acquisition of ColdLight, net of amounts repaid in 2015), partially offset by \$99 million used to acquire ColdLight, and \$64.9 million used to repurchase common shares outstanding.

Cash provided by operating activities

Cash provided by operating activities was \$179.9 million in 2015, compared to \$304.6 million in 2014 and \$224.7 million in 2013. Cash provided by operations was lower due to lower net income, higher restructuring payments (\$53.6 million in 2015 compared to \$20.6 million in 2014 and \$37.2 million in 2013) and contributions to pension plans, which were higher by \$33.8 million in 2015. Cash paid for income taxes was \$30.1 million, \$25.5 million, and \$35.4 million in 2015, 2014, and 2013, respectively.

Accounts receivable days sales outstanding was 57 days as of September 30, 2015 compared to 58 days as of September 30, 2014 and 60 days as of September 30, 2013. We periodically provide financing with payment terms up to 24 months to credit-worthy customers. Other assets in the accompanying Consolidated Balance Sheets include non-current receivables from customers related to extended payment term contracts totaling \$5.6 million and \$13.5 million at September 30, 2015 and 2014, respectively. We periodically transfer future payments under customer contracts to third-party financial institutions on a non-recourse basis. We sold \$3.0 million of receivables in 2015 compared to \$24.5 million in 2014 and \$17.0 million in 2013.

Cash used by investing activities

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Acquisitions of businesses, net of cash acquired	\$ (98,411)	\$ (323,525)	\$ (245,843)
Additions to property and equipment	(30,628)	(25,275)	(29,328)
Purchases of investments	(11,000)	—	—
Other	—	—	721
	<u>\$ (140,039)</u>	<u>\$ (348,800)</u>	<u>\$ (274,450)</u>

In the third quarter of 2015, we acquired ColdLight for \$98.6 million, net of cash acquired. In the fourth quarter 2014, we acquired Axeda and Atego for \$165.9 million and \$46.1 million, respectively, net of cash acquired, and in the second quarter of 2014, we acquired ThingWorx for \$111.5 million, net of cash acquired. In the first quarter of 2013, we acquired Servigistics, Inc. for \$220.8 million, net of cash acquired and, in the fourth quarter of 2013, we acquired NetIDEAS and Enigma Information Systems LTD, for an aggregate of \$25.0 million, net of cash acquired.

Our expenditures for property and equipment consist primarily of computer equipment, software, office equipment and facility improvements.

Cash provided (used) by financing activities

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Borrowings under credit facility	\$ 185,000	\$ 1,386,250	\$ —
Repayments of borrowings under credit facility	(128,750)	(1,032,500)	(111,875)
Repurchases of common stock	(64,940)	(224,915)	(74,871)
Proceeds from issuance of common stock	41	877	4,884
Payments of withholding taxes in connection with vesting of stock-based awards	(29,207)	(26,857)	(14,996)
Excess tax benefits from stock-based awards	24	10,428	334
Credit facility origination costs	—	(7,930)	—
Contingent consideration	\$ (4,323)	\$ —	\$ —
	<u>\$ (42,155)</u>	<u>\$ 105,353</u>	<u>\$ (196,524)</u>

In both the second and fourth quarters of 2014, we refinanced our credit facility as described in *Credit Facility* below. We incurred \$7.9 million of origination costs in 2014 in connection with entering into and amending the new and previous credit facilities. In 2015, we borrowed \$100 million as a result of the purchase of ColdLight and \$64.9 million to repurchase shares. In 2014, we borrowed \$280 million to finance acquisitions and \$125 million to repurchase shares under an accelerated share repurchase transaction. Proceeds from issuance of common stock reflects stock option exercises. Stock option exercises totaled 0.1 million shares in 2014 and 0.5 million shares in 2013. Stock option exercises were only 6,000 (approximately) in 2015. Assuming no additional stock options are granted, future proceeds from option exercises will be immaterial.

Share Repurchase Authorization

Our Articles of Organization authorize us to issue up to 500 million shares of our common stock. Our Board of Directors has periodically authorized the repurchase of shares of our common stock. We were authorized to repurchase up to \$100 million worth of shares with cash from operations for each of our fiscal years 2014 and 2013. Additionally, on August 4, 2014, our Board of Directors authorized us to repurchase up to an additional \$600 million of our common stock through September 30, 2017. We intend to use cash from operations and borrowings under our credit facility to make such repurchases. Pursuant to this repurchase authorization, in the fourth quarter of 2014 we entered into the \$125 million accelerated share repurchase agreement described below. We repurchased 2.7 million shares at a cost of \$64.9 million in 2015, 5.1 million shares at a cost of \$224.9 million in 2014 (including \$125 million purchased through accelerated share repurchase agreement described below), and 3.1 million shares at a cost of \$74.9 million in 2013. All shares of our common stock repurchased are automatically restored to the status of authorized and unissued.

On August 14, 2014, we entered into an accelerated share repurchase (“ASR”) agreement with a major financial institution (“Bank”). The ASR allows us to buy a large number of shares immediately at a purchase price determined by an average market price over a period of time. Under the ASR, we agreed to purchase \$125.0 million of our common stock, in total, with an initial delivery to us in August 2014 of 2.3 million shares. We settled the ASR in December 2014 and the Bank delivered to us 1.1 million additional shares.

Credit Facility

In November 2015, we entered into a multi-currency credit facility with a syndicate of sixteen banks for which JPMorgan Chase Bank, N.A. acts as Administrative Agent. This credit facility amended and restated our credit facility described in Note H in its entirety. We expect to use the credit facility for general corporate purposes, including acquisitions of businesses, share repurchases and working capital requirements.

The credit facility consists of a \$1 billion revolving loan commitment which may be increased by an additional \$500 million (in the form of revolving loans or term loans, or a combination thereof) if the existing or additional lenders are willing to make such increased commitments. The revolving loan commitment does not require amortization of principal and may be repaid in whole or in part prior to the scheduled maturity date at our option without penalty or premium. The credit facility matures on September 15, 2019, when all remaining amounts outstanding will be due and payable in full.

PTC and certain eligible foreign subsidiaries are eligible borrowers under the credit facility. The obligations under the credit facility are guaranteed by PTC and certain of its material domestic subsidiaries. In addition, PTC and certain of its material domestic subsidiaries' owned property (including equity interests) is subject to first priority perfected liens in favor of the lenders of this credit facility. 100% of the voting equity interests of certain of PTC's domestic subsidiaries and 65% of its material first-tier foreign subsidiaries are pledged as collateral for the obligations under the credit facility.

As of November 4, 2015, we had \$718 million outstanding under the credit facility.

The credit facility limits PTC's and its subsidiaries' ability to, among other things: incur liens or guarantee obligations; pay dividends (other than to PTC) and make other distributions; make investments and enter into joint ventures; dispose of assets; and engage in transactions with affiliates, except on an arms-length basis. Under the credit facility, PTC and its material domestic subsidiaries may not invest cash or property in, or loan to, PTC's foreign subsidiaries in aggregate amounts exceeding \$75 million for any purpose and an additional \$200 million for acquisitions of businesses. In addition, under the credit facility, PTC and its subsidiaries must maintain the following financial ratios:

- a total leverage ratio, defined as consolidated total indebtedness to the consolidated trailing four quarters EBITDA, not to exceed
 - prior to a Covenant Modification Trigger Event (incurring unsecured indebtedness of not less than \$200 million in aggregate) (x) 3.50 to 1.00 as of the last day of any fiscal quarter ending on or prior to July 2, 2016, and (y) 3.25 to 1.00 as of the last day of any fiscal quarter ending on or after September 30, 2016
 - on and after a Covenant Modification Trigger Event, 4.00 to 1.00 as of the last day of any fiscal quarter.
- a senior secured leverage ratio, defined as consolidated total indebtedness to consolidated trailing four quarters EBITDA, not to exceed 3.00 to 1.00 as of the last day of any fiscal quarter ending after a Covenant Modification Trigger Event, and
- a fixed charge coverage ratio, defined as the ratio of consolidated trailing four quarters EBITDA less consolidated capital expenditures to consolidated fixed charges, of not less than 3.50 to 1.00 as of the last day of any fiscal quarter.

Any failure to comply with the financial or operating covenants of the credit facility would prevent PTC from being able to borrow additional funds, and would constitute a default, permitting the lenders to, among other things, accelerate the amounts outstanding, including all accrued interest and unpaid fees, under the credit facility and to terminate the credit facility. A change in control of PTC, as defined in the agreement, also constitutes an event of default, permitting the lenders to accelerate the indebtedness and terminate the credit facility.

Expectations for Fiscal 2016

We believe that existing cash and cash equivalents, together with cash generated from operations, and amounts available under our credit facility will be sufficient to meet our working capital and capital expenditure requirements (which we expect to be \$37 million in 2016) through at least the next twelve months and to meet our known long-term capital requirements. In 2016, we expect to pay \$28 million to settle the China matter and to repurchase \$80 million of our stock. Our ability to repurchase shares is subject to our having sufficient cash available and maintaining compliance with credit facility covenants.

We evaluate possible strategic transactions on an ongoing basis and at any given time may be engaged in discussions or negotiations with respect to possible strategic transactions. Our expected uses of cash could change, our cash position could be reduced and we may incur additional debt obligations to the extent we complete additional acquisitions.

We have substantial cash requirements in the United States and a significant portion of our cash is generated and held outside of the United States. At September 30, 2015, we had cash and cash equivalents of \$75.5 million in the United States, \$66.7 million in Europe, \$89.2 million in the Pacific Rim (including India), \$20.8 million in Japan and \$21.1 million in other non-U.S. countries. We believe that the combination of our existing United States cash and cash equivalents, future United States operating cash flows and cash available under our credit facility, are sufficient to meet our ongoing United States operating expenses and known capital requirements.

In November of 2015, we acquired the Vuforia business from Qualcomm Connected Experiences, Inc. for \$65 million in cash.

Contractual Obligations

At September 30, 2015, our contractual obligations were as follows:

Contractual Obligations	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
	(in millions)				
Credit facility (1)	\$ 719.0	\$ 64.2	\$ 150.7	\$ 504.0	\$ —
Operating leases (2)	144.1	35.8	48.3	33.3	26.7
Purchase obligations (3)	28.0	21.6	5.8	0.7	—
Pension liabilities (4)	20.2	0.8	1.5	1.5	16.4
Unrecognized tax benefits (5)	14.1	—	—	—	—
Total	<u>\$ 925.4</u>	<u>\$ 122.4</u>	<u>\$ 206.3</u>	<u>\$ 539.5</u>	<u>\$ 43.1</u>

- (1) Credit facility amounts above include required principal repayments and interest and commitment fees based on the balance outstanding as of September 30, 2015 and the interest rate in effect as of September 30, 2015, 1.875%. Pursuant to our amended and restated credit facility signed November 4, 2015, the term loan was converted into a revolving loan. The credit facility matures on September 15, 2019, when all remaining amounts outstanding will be due and payable in full. Future payments under this new agreement will be: \$13.8 million in less than one year, \$28.6 million in one to three years, and \$732.6 million in three to five years.
- (2) The future minimum lease payments above include minimum future lease payments for excess facilities under noncancelable operating leases. These leases qualify for operating lease accounting treatment and, as such, are not included on our balance sheet. See Note I *Commitments and Contingencies* of “Notes to Consolidated Financial Statements” in this Annual Report for additional information regarding our operating leases.
- (3) Purchase obligations represent minimum commitments due to third parties, including royalty contracts, research and development contracts, telecommunication contracts, information technology maintenance contracts in support of internal-use software and hardware and other marketing and consulting contracts. Contracts for which our commitment is variable, based on volumes, with no fixed minimum quantities, and contracts that can be canceled without payment penalties have been excluded. The purchase obligations included above are in addition to amounts included in current liabilities and prepaid expenses recorded on our September 30, 2015 consolidated balance sheet.
- (4) These obligations relate to our international pension plans. These liabilities are not subject to fixed payment terms. Payments have been estimated based on the plans’ current funded status, planned employer contributions and actuarial assumptions. In addition, we may, at our discretion, make additional voluntary contributions to the plans. See Note M *Pension Plans* of “Notes to Consolidated Financial Statements” in this Annual Report for further discussion.
- (5) As of September 30, 2015, we had recorded total unrecognized tax benefits of \$14.1 million. This liability is not subject to fixed payment terms and the amount and timing of payments, if any, which we will make related to this liability, are not known. See Note G *Income Taxes* of “Notes to Consolidated Financial Statements” in this Annual Report for additional information.

As of September 30, 2015, we had letters of credit and bank guarantees outstanding of approximately \$4 million (of which \$1.1 million was collateralized), primarily related to our corporate headquarters lease in Needham, Massachusetts.

Off-Balance Sheet Arrangements

We have not created, and are not party to, any special-purpose or off-balance sheet entities for the purpose of raising capital, incurring debt or operating parts of our business that are not consolidated (to the extent of our ownership interest therein) into our financial statements. We have not entered into any transactions with unconsolidated entities whereby we have subordinated retained interests, derivative instruments or other contingent arrangements that expose us to material continuing risks, contingent liabilities, or any other obligation under a variable interest in an unconsolidated entity that provides financing, liquidity, market risk or credit risk support to us.

Recent Accounting Pronouncements

Revenue Recognition

In May 2014, the Financial Accounting Standards Board (the FASB) issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers: Topic 606 (ASU 2014-09), to supersede nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, it is possible more

judgment and estimates may be required within the revenue recognition process than required under existing U.S. GAAP including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 is effective for us in our first quarter of fiscal 2018 using either of two methods: (i) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within ASU 2014-09; or (ii) retrospective with the cumulative effect of initially applying ASU 2014-09 recognized at the date of initial application and providing certain additional disclosures as defined per ASU 2014-09. We are currently evaluating the impact of our pending adoption of ASU 2014-09 on our consolidated financial statements.

Debt Issuance Costs

In April 2015, the FASB issued ASU No. 2015-03, Interest-Imputation of Interest (Subtopic 835-30), to simplify the required presentation of debt issuance costs. The amended guidance requires that debt issuance costs be presented in the balance sheet as a direct reduction from the carrying amount of the related debt liability rather than as an asset. It is effective for financial statements issued for fiscal years beginning after December 15, 2015, our fiscal 2017, with early adoption permitted. The new guidance will be applied retrospectively to each prior period presented. We are currently evaluating the impact of the new guidance on our consolidated financial statements.

ITEM 7A. Quantitative and Qualitative Disclosures about Market Risk

We face exposure to financial market risks, including adverse movements in foreign currency exchange rates and changes in interest rates. These exposures may change over time as business practices evolve and could have a material adverse impact on our financial results.

Foreign currency exchange risk

Our earnings and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. Our most significant foreign currency exposures relate to Western European countries, Japan, China and Canada. We enter into foreign currency forward contracts to manage our exposure to fluctuations in foreign exchange rates that arise from receivables and payables denominated in foreign currencies. We do not enter into or hold foreign currency derivative financial instruments for trading or speculative purposes nor do we enter into derivative financial instruments to hedge future cash flow or forecast transactions.

Our non-U.S. revenues generally are transacted through our non-U.S. subsidiaries and typically are denominated in their local currency. In addition, expenses that are incurred by our non-U.S. subsidiaries typically are denominated in their local currency. In 2015, 2014, and 2013, approximately two-thirds of our revenue and half of our expenses were transacted in currencies other than the U.S. dollar. Currency translation affects our reported results because we report our results of operations in U.S. Dollars. Historically, our most significant currency risk has been changes in the Euro and Japanese Yen relative to the U.S. Dollar. Based on 2015 revenue and expense levels (excluding restructuring charges and stock-based compensation), a \$0.10 change in the USD to European exchange rates and a 10 Yen change in the Yen to USD exchange rate would impact operating income by approximately \$19 million and \$6 million, respectively.

Our exposure to foreign currency exchange rate fluctuations arises in part from intercompany transactions, with most intercompany transactions occurring between a U.S. dollar functional currency entity and a foreign currency denominated entity. Intercompany transactions typically are denominated in the local currency of the non-U.S. dollar functional currency subsidiary in order to centralize foreign currency risk. Also, both PTC (the parent company) and our non-U.S. subsidiaries may transact business with our customers and vendors in a currency other than their functional currency (transaction risk). In addition, we are exposed to foreign exchange rate fluctuations as the financial results and balances of our non-U.S. subsidiaries are translated into U.S. dollars (translation risk). If sales to customers outside of the United States increase, our exposure to fluctuations in foreign currency exchange rates will increase.

Our foreign currency risk management strategy is principally designed to mitigate the future potential financial impact of changes in the U.S. dollar value of balances denominated in foreign currency, resulting from changes in foreign currency exchange rates. Our foreign currency hedging program uses forward contracts to manage the foreign currency exposures that exist as part of our ongoing business operations. The contracts primarily are denominated in Canadian Dollars and European currencies, and have maturities of less than three months.

Generally, we do not designate foreign currency forward contracts as hedges for accounting purposes, and changes in the fair value of these instruments are recognized immediately in earnings. Because we enter into forward contracts only as an economic hedge, any gain or loss on the underlying foreign-denominated balance would be offset by the loss or gain on the forward contract. Gains and losses on forward contracts and foreign denominated receivables and payables are included in foreign currency net losses.

As of September 30, 2015 and 2014, we had outstanding forward contracts with notional amounts equivalent to the following:

Currency Hedged	September 30,	
	2015	2014
	(in thousands)	
Canadian/U.S. Dollar	\$ 17,448	\$ 25,583
Euro/U.S. Dollar	82,917	61,751
British Pound/Euro	9,409	14,259
Israeli Sheqel/U.S. Dollar	4,607	6,144
Japanese Yen/U.S. Dollar	25,133	—
Swiss Franc/U.S. Dollar	5,149	1,200
All other	12,592	8,051
Total	\$ 157,255	\$ 116,988

Debt

As of September 30, 2015, we had \$668.1 million outstanding under our variable-rate credit facility comprised of a \$475 million term loan and a \$193.1 million revolving loan. Loans under the credit facility bear interest at variable rates which reset every 30 to 180 days depending on the rate and period selected by the Company. These loans are subject to interest rate risk as interest rates will be adjusted at each rollover date to the extent such amounts are not repaid. As of September 30, 2015, the annual rates on the term and revolving loan loans were 1.875%. If there was a hypothetical 100 basis point change in interest rates, the annual net impact to earnings and cash flows would be \$6.7 million. This hypothetical change in cash flows and earnings has been calculated based on the borrowings outstanding at September 30, 2015 and a 100 basis point per annum change in interest rate applied over a one-year period.

Cash and cash equivalents

As of September 30, 2015, cash equivalents were invested in highly liquid investments with maturities of three months or less when purchased. We invest our cash with highly rated financial institutions in North America, Europe and Asia-Pacific and in diversified domestic and international money market mutual funds. At September 30, 2015, we had cash and cash equivalents of \$75.5 million in the United States, \$66.7 million in Europe, \$89.2 million in the Pacific Rim (including India), \$20.8 million in Japan and \$21.2 million in other non-U.S. countries. Given the short maturities and investment grade quality of the portfolio holdings at September 30, 2015, a hypothetical 10% change in interest rates would not materially affect the fair value of our cash and cash equivalents.

Our invested cash is subject to interest rate fluctuations and, for non-U.S. operations, foreign currency risk. In a declining interest rate environment, we would experience a decrease in interest income. The opposite holds true in a rising interest rate environment. Over the past several years, the U.S. Federal Reserve Board, European Central Bank and Bank of England have changed certain benchmark interest rates, which have led to declines and increases in market interest rates. These changes in market interest rates have resulted in fluctuations in interest income earned on our cash and cash equivalents. Interest income will continue to fluctuate based on changes in market interest rates and levels of cash available for investment. Our consolidated cash balances were impacted unfavorably by \$17.9 million, \$9.4 million, and \$1.3 million in 2015, 2014 and 2013, respectively, due to changes in foreign currencies relative to the U.S. dollar, particularly the Euro and the Japanese Yen.

ITEM 8. Financial Statements and Supplementary Data

The consolidated financial statements and notes to the consolidated financial statements are attached as APPENDIX A.

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 maintains disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) that are designed to provide reasonable assurance that information required to be disclosed in our reports filed or submitted under the Exchange Act is processed, recorded, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer (our principal executive officer and principal financial officer, respectively), as appropriate, to allow for timely decisions regarding required disclosure.

As required by SEC Rule 15d-15(b), we carried out an evaluation, under the supervision and with the participation of management, including our principal executive and principal financial officers, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Annual Report. Based on this evaluation, we concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of September 30, 2015.

Management’s Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our 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 our assets;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our 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.

Our management assessed the effectiveness of our internal control over financial reporting as of September 30, 2015 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework (2013)*. Based on this assessment and those criteria, our management concluded that, as of September 30, 2015, our internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of September 30, 2015 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which appears under Item 8.

Change in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the quarter ended September 30, 2015 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. Other Information

None.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The information required by this item with respect to our directors and executive officers may be found in the sections captioned “Proposal 1: Election of Directors,” “Corporate Governance,” “Section 16(a) Beneficial Ownership Reporting Compliance,” and “Transactions With Related Persons” appearing in our 2016 Proxy Statement. Such information is incorporated into this Item 10 by reference.

Our executive officers are:

<u>Name</u>	<u>Age</u>	<u>Position</u>
James Heppelmann	51	President and Chief Executive Officer
Andrew Miller	55	Executive Vice President, Chief Financial Officer
Barry Cohen	71	Executive Vice President, Strategy
Matthew Cohen	39	Executive Vice President, Global Services
Anthony DiBona	60	Executive Vice President, Global Support
Robert Gremley	50	Group President, Technology Platform Group
Aaron von Staats	49	Corporate Vice President, General Counsel and Secretary

Mr. Heppelmann has been our President and Chief Executive Officer since October 2010. Mr. Heppelmann was our President and Chief Operating Officer from March 2009 through September 2010. Prior to that, Mr. Heppelmann served as our Executive Vice President and Chief Product Officer from February 2003 to March 2009. Mr. Heppelmann joined PTC in 1998.

Mr. Miller has been our Executive Vice President, Chief Financial Officer since February 2015 when he joined PTC. Mr. Miller was Executive Vice President, Chief Financial Officer of Cepheid, a publicly-traded medical technology company from April 2008 to February 2015. Prior to that, Mr. Miller was employed by Autodesk Inc., a publicly-traded software company, where he was the Vice President of Finance and Chief Accounting Officer.

Mr. Barry Cohen has been our Executive Vice President, Strategy since October 2010. Mr. Cohen was our Executive Vice President, Strategic Services and Partners from August 2002 through September 2010. Mr. Cohen joined PTC in 1998.

Mr. Matthew Cohen has been our Executive Vice President, Global Services since April 2014. Mr. Cohen was a Divisional Vice President, Global Services from September 2010 to March 2014. Mr. Cohen joined PTC in 2001.

Mr. DiBona has been our Executive Vice President, Global Support since April 2003. Mr. DiBona joined PTC in 1998.

Mr. Gremley has been our Technology Platform Group President since October 1, 2015. Prior to that, Mr. Gremley served as Group President of our Internet of Things business from February 2012 to September 2015 and as Executive Vice President, Corporate Marketing from March 2009 to January 2012. Mr. Gremley joined PTC in 1989.

Mr. von Staats has been Corporate Vice President, General Counsel and Secretary since March 2008. Prior to that, he served as Senior Vice President, General Counsel and Clerk from February 2003 to February 2008. Mr. von Staats joined PTC in 1997.

Code of Business Conduct and Ethics

We have adopted a Code of Ethics for Senior Executive Officers that applies to our Chief Executive Officer, President, Chief Financial Officer, and Controller, as well as others. A copy of the Code of Ethics for Senior Executive Officers is publicly available on our website at www.ptc.com. If we make any substantive amendments to the Code of Ethics for Senior Executive Officers or grant any waiver, including any implicit waiver, from the Code of Ethics for Senior Executive Officers, to our Chief Executive Officer, President, Chief Financial Officer or Controller, we will disclose the nature of such amendment or waiver in a current report on Form 8-K.

ITEM 11. Executive Compensation

Information with respect to director and executive compensation may be found under the headings "Director Compensation," "Compensation Discussion and Analysis," "Executive Compensation," and "Compensation Committee Report" appearing in our 2016 Proxy Statement. Such information is incorporated herein by reference.

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

Information required by this item may be found under the headings "Information about PTC Common Stock Ownership" and "Equity Compensation Plan Information" in our 2016 Proxy Statement. Such information is incorporated herein by reference.

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

Information with respect to this item may be found under the headings “Independence of Our Directors,” “Review of Transactions with Related Persons” and “Transactions with Related Persons” in our 2016 Proxy Statement. Such information is incorporated herein by reference.

ITEM 14. Principal Accounting Fees and Services

Information with respect to this item may be found under the headings “Engagement of Independent Auditor and Approval of Professional Services and Fees” and “PricewaterhouseCoopers LLP Professional Services and Fees” in our 2016 Proxy Statement. Such information is incorporated herein by reference.

PART IV

ITEM 15. Exhibits and Financial Statement Schedules

(a) Documents Filed as Part of Form 10-K

1. Financial Statements

<u>Report of Independent Registered Public Accounting Firm</u>	<u>F-1</u>
<u>Consolidated Balance Sheets as of September 30, 2015 and 2014</u>	<u>F-2</u>
<u>Consolidated Statements of Operations for the years ended September 30, 2015, 2014 and 2013</u>	<u>F-3</u>
<u>Consolidated Statements of Comprehensive Income (Loss) for the years ended September 30, 2015, 2014 and 2013</u>	<u>F-4</u>
<u>Consolidated Statements of Cash Flows for the years ended September 30, 2015, 2014 and 2013</u>	<u>F-5</u>
<u>Consolidated Statements of Stockholders' Equity for the years ended September 30, 2015, 2014 and 2013</u>	<u>F-6</u>
<u>Notes to Consolidated Financial Statements</u>	<u>F-7</u>
2. Financial Statement Schedules

Schedules have been omitted since they are either not required, not applicable, or the information is otherwise included in the Financial Statements per Item 15(a)1 above.
3. Exhibits

The list of exhibits in the Exhibit Index is incorporated herein by reference.

(b) Exhibits

We hereby file the exhibits listed in the attached Exhibit Index.

(c) Financial Statement Schedules

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 on the 23rd day of November, 2015.

PTC Inc.

By: _____
/s/ JAMES HEPELMANN
James Heppelmann
President and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned officers and directors of PTC Inc., hereby severally constitute Andrew Miller and Aaron von Staats, Esq., and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below any and all subsequent amendments to this report, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact may do or cause to be done by virtue hereof.

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 indicated below, on the 23rd day of November, 2015.

<u>Signature</u>	<u>Title</u>
(i) Principal Executive Officer:	
<u>/s/ JAMES HEPPELMANN</u> James Heppelmann	President and Chief Executive Officer
(ii) Principal Financial and Accounting Officer:	
<u>/s/ ANDREW MILLER</u> Andrew Miller	Executive Vice President and Chief Financial Officer
(iii) Board of Directors:	
<u>/s/ ROBERT SCHECHTER</u> Robert Schechter	Chairman of the Board of Directors
<u>/s/ JANICE CHAFFIN</u> Janice Chaffin	Director
<u>/s/ DONALD GRIERSON</u> Donald Grierson	Director
<u>/s/ JAMES HEPPELMANN</u> James Heppelmann	Director
<u>/s/ KLAUS HOEHN</u> Klaus Hoehn	Director
<u>/s/ PAUL LACY</u> Paul Lacy	Director
<u>/s/ RENATO ZAMBONINI</u> Renato Zambonini	Director

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Exhibit</u>
2.1	— Asset Purchase Agreement dated as of October 9, 2015 by and between PTC Inc. and Qualcomm Connected Experiences, Inc. (filed as Exhibit 10.1 to our Current Report on Form 8-K dated October 13, 2015 (File No. 0-18059) and incorporated herein by reference).
2.2	— Agreement and Plan of Merger dated as of May 4, 2015 by and among PTC Inc., Cedar Acquisition LLC, ColdLight Solutions, LLC, and Cedar Holder Representative, LLC, as the Securityholder Representative (filed as Exhibit 10.1 to our Current Report on Form 8-K dated May 5, 2015 (File No. 0-18059) and incorporated herein by reference).
3.1	— Restated Articles of Organization of PTC Inc. adopted August 4, 2015.
3.2	— By-Laws, as amended and restated, of PTC Inc. (filed as Exhibit 3.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended March 29, 2014 (File No. 0-18059) and incorporated herein by reference).
10.1.1*	— PTC Inc. 2000 Equity Incentive Plan (filed as Exhibit 10.1 to our Current Report on Form 8-K filed on March 6, 2013 and incorporated herein by reference).
10.1.2*	— Form of Restricted Stock Agreement (Non-Employee Director) (filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended April 4, 2009 (File No. 0-18059) and incorporated herein by reference).
10.1.3*	— Form of Restricted Stock Agreement (Employee) (filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended July 2, 2005 (File No. 0-18059) and incorporated herein by reference).
10.1.4*	— Form of Restricted Stock Unit Certificate (U.S.) (filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the fiscal quarter ended July 2, 2005 (File No. 0-18059) and incorporated herein by reference).
10.1.5	— Form of Restricted Stock Unit Certificate (Non-U.S.) (filed as Exhibit 10.4 to our Quarterly Report on Form 10-Q for the fiscal quarter ended July 2, 2005 (File No. 0-18059) and incorporated herein by reference).
10.1.6	— Form of Incentive Stock Option Certificate (filed as Exhibit 10.5 to our Quarterly Report on Form 10-Q for the fiscal quarter ended July 2, 2005 (File No. 0-18059) and incorporated herein by reference).
10.1.7*	— Form of Nonstatutory Stock Option Certificate (filed as Exhibit 10.6 to our Quarterly Report on Form 10-Q for the fiscal quarter ended July 2, 2005 (File No. 0-18059) and incorporated herein by reference).
10.1.8*	— Form of Stock Appreciation Right Certificate (filed as Exhibit 10.7 to our Quarterly Report on Form 10-Q for the fiscal quarter ended July 2, 2005 (File No. 0-18059) and incorporated herein by reference).
10.1.9*	— Form of Restricted Stock Unit Certificate (U.S. Section 16 Officers) (filed as Exhibit 10.1.9 to our Annual Report on Form 10-K for the fiscal year ended September 30, 2012 (File No. 0-18059) and incorporated herein by reference).
10.1.10*	— Form of Restricted Stock Unit Certificate (Non-Employee Director) (filed as Exhibit 10.1.1 to our Quarterly Report on Form 10-Q for the fiscal quarter ended March 30, 2013 (File No. 0-18059) and incorporated herein by reference).
10.1.11	— Form of Restricted Stock Unit Certificate (U.S.) (filed as Exhibit 10.1.11 to our Annual Report Form 10-K for the fiscal year ended September 30, 2013 (File No. 0-18059) and incorporated herein by reference).

- 10.1.12* — Form of Restricted Stock Unit Certificate (U.S. Section 16 Officers) (filed as Exhibit 10.1.12 to our Annual Report Form 10-K for the fiscal year ended September 30, 2014 (File No. 0-18059) and incorporated herein by reference).
- 10.1.13* — Form of Restricted Stock Unit Certificate (U.S. Non Section 16 Executives) (filed as Exhibit 10.1.13 to our Annual Report Form 10-K for the fiscal year ended September 30, 2014 (File No. 0-18059) and incorporated herein by reference).
- 10.1.14 — Form of Restricted Stock Unit Certificate (U.S.) (filed as Exhibit 10.1.14 to our Annual Report Form 10-K for the fiscal year ended September 30, 2014 (File No. 0-18059) and incorporated herein by reference).
- 10.2* — 2009 Executive Cash Incentive Performance Plan (filed as Exhibit 10.5 to our Annual Report on Form 10-K for the fiscal year ended September 30, 2012 (File No. 0-18059) and incorporated herein by reference).
- 10.3* — Amended and Restated Executive Agreement with James Heppelmann, President and Chief Executive Officer, dated May 7, 2010 (filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended April 3, 2010 (File No. 0-18059) and incorporated herein by reference).
- 10.4* — Amendment to Executive Agreement dated as of November 18, 2011 by and between PTC Inc. and James Heppelmann to Amended and Restated Executive Agreement dated as of May 7, 2010 by and between PTC and James Heppelmann (filed as Exhibit 10.2 to our Current Report on Form 8-K dated November 15, 2011 (File No. 0-18059) and incorporated herein by reference).
- 10.5* — Amendment to Executive Agreement by and between PTC Inc. and James Heppelmann dated May 13, 2013 (filed as Exhibit 10.9 to our Annual Report on Form 10-K for the fiscal year ended September 30, 2013 (File No. 0-18059) and incorporated herein by reference).
- 10.6* — Amendment to Executive Agreement by and between PTC Inc. and James Heppelmann dated August 4, 2015 (filed as Exhibit 10.1 to our Current Report on Form 8-K dated August 10, 2015 (File No. 0-18059) and incorporated herein by reference).
- 10.7* — Form of Amended and Restated Executive Agreement by and between PTC Inc. and each of Barry Cohen, Anthony DiBona, and Aaron von Staats (filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the fiscal quarter dated April 3, 2010 (File No. 0-18059) and incorporated herein by reference).
- 10.8* — Form of Amendment to Amended and Restated Executive Agreement entered into as of November 18, 2011 by and between PTC Inc. and each of Barry Cohen, Anthony DiBona, and Aaron von Staats (filed as Exhibit 10.3 to our Current Report on Form 8-K dated November 15, 2011 (File No. 0-18059) and incorporated herein by reference).
- 10.9* — Executive Agreement dated April 16, 2014 between PTC Inc. and Matthew Cohen (filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q for the fiscal quarter ended March 29, 2014 (File No. 0-18059) and incorporated herein by reference).
- 10.10* — Executive Agreement dated February 11, 2015 between PTC Inc. and Andrew Miller (filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q for the fiscal quarter ended April 4, 2015 (File No. 0-18059) and incorporated herein by reference).
- 10.11* — Form of Amendment to Executive Agreement dated August 4, 2015 by and between PTC Inc. and each of Andrew Miller, Barry Cohen, Matthew Cohen, Anthony DiBona, and Aaron von Staats (filed as Exhibit 10.2 to our Current Report on Form 8-K dated August 10, 2015 (File No. 0-18059) and incorporated herein by reference).
- 10.12* — Amended and Restated Executive Agreement dated May 7, 2010, as amended, between PTC Inc. and Robert Gremley.

- 10.13 — Lease dated December 14, 1999 by and between PTC Inc. and Boston Properties Limited Partnership (filed as Exhibit 10.21 to our Annual Report on Form 10-K for the fiscal year ended September 30, 2000 (File No. 0-18059) and incorporated herein by reference).
- 10.14 — Third Amendment to Lease Agreement dated as of October 27, 2010 by and between Boston Properties Limited Partnership and PTC Inc. (filed as Exhibit 10.1 to our Current Report on Form 8-K dated November 8, 2010 (File No. 0-18059) and incorporated herein by reference).
- 10.15 — Credit Agreement dated as of November 4, 2015 by and among PTC Inc., JPMorgan Chase Bank, N.A., as Administrative Agent, and the lenders party thereto (filed as Exhibit 10 to our Current Report on Form 8-K dated November 4, 2015 (File No. 0-18059) and incorporated herein by reference).
- 21.1 — Subsidiaries of PTC Inc.
- 23.1 — Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm.
- 31.1 — Certification of the Chief Executive Officer Pursuant to Exchange Act Rules 13(a)-14(a) and 15d-14(a).
- 31.2 — Certification of the Chief Financial Officer Pursuant to Exchange Act Rules 13(a)-14(a) and 15d-14(a).
- 32** — Certification of Periodic Financial Report Pursuant to 18 U.S.C. Section 1350.
- 101 — The following materials from PTC Inc.'s Annual Report on Form 10-K for the year ended September 30, 2015, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of September 30, 2015 and 2014; (ii) Consolidated Statements of Operations for the years ended September 30, 2015, 2014 and 2013; (iii) Consolidated Statements of Comprehensive Income for the years ended September 30, 2015, 2014 and 2013; (iv) Consolidated Statements of Cash Flows for the years ended September 30, 2015, 2014 and 2013; (v) Consolidated Statements of Stockholders' Equity for the years ended September 30, 2015, 2014 and 2013; and (vi) Notes to Consolidated Financial Statements.

* Identifies a management contract or compensatory plan or arrangement in which an executive officer or director of PTC participates.

** Indicates that the exhibit is being furnished with this report and is not filed as a part of it.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of PTC Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows present fairly, in all material respects, the financial position of PTC Inc. and its subsidiaries at September 30, 2015 and September 30, 2014, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 2015 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2015, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in "Management's Annual Report on Internal Control over Financial Reporting" appearing under item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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/ PricewaterhouseCoopers LLP

Boston, Massachusetts
November 23, 2015

PTC Inc.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share data)

	September 30,	
	2015	2014
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 273,417	\$ 293,654
Accounts receivable, net of allowance for doubtful accounts of \$998 and \$1,622 at September 30, 2015 and 2014, respectively	197,275	235,688
Prepaid expenses	56,365	37,667
Other current assets	140,819	133,859
Deferred tax assets	36,803	31,299
Total current assets	<u>704,679</u>	<u>732,167</u>
Property and equipment, net	65,162	67,783
Goodwill	1,069,041	1,012,527
Acquired intangible assets, net	291,301	336,873
Deferred tax assets	38,936	8,958
Other assets	40,794	41,646
Total assets	<u>\$ 2,209,913</u>	<u>\$ 2,199,954</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 13,361	\$ 19,802
Accrued expenses and other current liabilities	97,613	57,536
Accrued compensation and benefits	82,414	144,875
Accrued income taxes	4,010	9,329
Deferred tax liabilities	1,622	854
Current portion of long term debt	50,000	25,000
Deferred revenue	368,240	369,271
Total current liabilities	<u>617,260</u>	<u>626,667</u>
Long term debt, net of current portion	618,125	586,875
Deferred tax liabilities	42,361	36,601
Deferred revenue	18,610	13,273
Other liabilities	53,386	82,649
Total liabilities	<u>1,349,742</u>	<u>1,346,065</u>
Commitments and contingencies (Note I)		
Stockholders' equity:		
Preferred stock, \$0.01 par value; 5,000 shares authorized; none issued	—	—
Common stock, \$0.01 par value; 500,000 shares authorized; 113,745 and 115,025 shares issued and outstanding at September 30, 2015 and 2014, respectively	1,137	1,150
Additional paid-in capital	1,553,390	1,597,277
Accumulated deficit	(602,614)	(650,171)
Accumulated other comprehensive loss	(91,742)	(94,367)
Total stockholders' equity	<u>860,171</u>	<u>853,889</u>
Total liabilities and stockholders' equity	<u>\$ 2,209,913</u>	<u>\$ 2,199,954</u>

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

PTC Inc.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Year ended September 30,		
	2015	2014	2013
Revenue:			
License and subscription	\$ 347,999	\$ 389,739	\$ 354,282
Support	681,524	688,502	654,679
Professional services	225,719	278,726	284,580
Total revenue	<u>1,255,242</u>	<u>1,356,967</u>	<u>1,293,541</u>
Cost of revenue:			
Cost of license and subscription revenue	53,163	45,005	39,037
Cost of support revenue	82,829	84,703	81,081
Cost of professional services revenue	198,742	243,975	252,921
Total cost of revenue	<u>334,734</u>	<u>373,683</u>	<u>373,039</u>
Gross margin	920,508	983,284	920,502
Operating expenses			
Sales and marketing	338,777	357,447	360,640
Research and development	227,513	226,496	221,918
General and administrative	166,732	142,232	131,937
U.S. pension settlement loss	66,332	—	—
Amortization of acquired intangible assets	36,129	32,127	26,486
Restructuring charges	43,409	28,406	52,197
Total operating expenses	<u>878,892</u>	<u>786,708</u>	<u>793,178</u>
Operating income	41,616	196,576	127,324
Foreign currency losses, net	(2,706)	(4,469)	(2,027)
Interest income	3,697	3,117	2,862
Interest expense	(14,742)	(8,155)	(6,976)
Other expense (income), net	(1,340)	(957)	5,051
Income before income taxes	26,525	186,112	126,234
Provision (benefit) for income taxes	(21,032)	25,918	(17,535)
Net income	<u>\$ 47,557</u>	<u>\$ 160,194</u>	<u>\$ 143,769</u>
Earnings per share—Basic	\$ 0.41	\$ 1.36	\$ 1.20
Earnings per share—Diluted	\$ 0.41	\$ 1.34	\$ 1.19
Weighted average shares outstanding—Basic	114,775	118,094	119,473
Weighted average shares outstanding—Diluted	116,012	119,984	121,240

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

PTC Inc.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	Year ended September 30,		
	2015	2014	2013
Net income	\$ 47,557	\$ 160,194	\$ 143,769
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustment, net of tax of \$0 for all periods	(47,177)	(24,069)	7,165
Amortization of net actuarial pension loss included in net income, net of tax of \$18.5 million, \$0.3 million, and \$1.6 million in 2015, 2014 and 2013, respectively	52,249	3,048	2,772
Pension net gain (loss) arising during the period net of tax of \$1.6 million, \$2.8 million and (\$6.3 million) in 2015, 2014, and 2013, respectively	(4,797)	(24,267)	11,971
Change in unamortized pension loss during the period related to changes in foreign currency	2,350	2,081	(567)
Other comprehensive income (loss)	2,625	(43,207)	21,341
Comprehensive income	<u>\$ 50,182</u>	<u>\$ 116,987</u>	<u>\$ 165,110</u>

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

PTC Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year ended September 30,		
	2015	2014	2013
Cash flows from operating activities:			
Net income	\$ 47,557	\$ 160,194	\$ 143,769
Adjustments to reconcile net income to net cash provided by operating activities:			
Stock-based compensation	50,182	50,889	48,787
Depreciation and amortization	84,433	77,307	76,551
Benefit from deferred income taxes	(49,361)	(19,946)	(39,714)
Excess tax benefits realized from stock-based awards	(24)	(10,428)	(334)
Pension settlement loss	66,332	—	—
Other non-cash costs, net	157	(760)	339
Changes in operating assets and liabilities, excluding the effects of acquisitions:			
Accounts receivable	29,723	7,554	17,308
Accounts payable and accrued expenses	31,134	(436)	(4,828)
Accrued compensation and benefits	(56,950)	8,974	11,036
Deferred revenue	8,852	24,998	6,727
Accrued income taxes, net of income tax receivable	(3,536)	19,134	(15,211)
Other current assets and prepaid expenses	(10,716)	4,417	(9,113)
Other noncurrent assets and liabilities	(17,880)	(17,345)	(10,634)
Net cash provided by operating activities	179,903	304,552	224,683
Cash flows from investing activities:			
Additions to property and equipment	(30,628)	(25,275)	(29,328)
Acquisitions of businesses, net of cash acquired	(98,411)	(323,525)	(245,843)
Purchases of investments	(11,000)	—	—
Other	—	—	721
Net cash used by investing activities	(140,039)	(348,800)	(274,450)
Cash flows from financing activities:			
Borrowings under credit facility	185,000	1,386,250	—
Repayments of borrowings under credit facility	(128,750)	(1,032,500)	(111,875)
Repurchases of common stock	(64,940)	(224,915)	(74,871)
Proceeds from issuance of common stock	41	877	4,884
Excess tax benefits realized from stock-based awards	24	10,428	334
Payments of withholding taxes in connection with vesting of stock-based awards	(29,207)	(26,857)	(14,996)
Credit facility origination costs	—	(7,930)	—
Contingent consideration	(4,323)	—	—
Net cash provided (used) by financing activities	(42,155)	105,353	(196,524)
Effect of exchange rate changes on cash and cash equivalents	(17,946)	(9,364)	(1,339)
Net increase (decrease) in cash and cash equivalents	(20,237)	51,741	(247,630)
Cash and cash equivalents, beginning of year	293,654	241,913	489,543
Cash and cash equivalents, end of year	\$ 273,417	\$ 293,654	\$ 241,913
Supplemental disclosure of non-cash financing activities:			
Fair value of contingent consideration recorded for acquisition	\$ 3,800	\$ 13,048	\$ —

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

PTC Inc.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balance as of October 1, 2012	119,553	\$ 1,196	\$ 1,822,698	\$ (954,134)	\$ (72,501)	\$ 797,259
Common stock issued for employee stock-based awards	2,655	27	4,857	—	—	4,884
Shares surrendered by employees to pay taxes related to stock-based awards	(709)	(7)	(14,989)	—	—	(14,996)
Compensation expense from stock-based awards	—	—	48,787	—	—	48,787
Excess tax benefits from stock-based awards	—	—	307	—	—	307
Net income	—	—	—	143,769	—	143,769
Repurchases of common stock	(3,053)	(31)	(74,840)	—	—	(74,871)
Foreign currency translation adjustment	—	—	—	—	7,165	7,165
Change in pension benefits, net of tax	—	—	—	—	14,176	14,176
Balance as of September 30, 2013	118,446	\$ 1,185	\$ 1,786,820	\$ (810,365)	\$ (51,160)	\$ 926,480
Common stock issued for employee stock-based awards	2,455	24	853	—	—	877
Shares surrendered by employees to pay taxes related to stock-based awards	(808)	(8)	(26,849)	—	—	(26,857)
Compensation expense from stock-based awards	—	—	50,889	—	—	50,889
Excess tax benefits from stock-based awards	—	—	10,428	—	—	10,428
Net income	—	—	—	160,194	—	160,194
Repurchases of common stock	(5,068)	(51)	(187,364)	—	—	(187,415)
Common stock repurchase holdback	—	—	(37,500)	—	—	(37,500)
Foreign currency translation adjustment	—	—	—	—	(24,069)	(24,069)
Change in pension benefits, net of tax	—	—	—	—	(19,138)	(19,138)
Balance as of September 30, 2014	115,025	\$ 1,150	\$ 1,597,277	\$ (650,171)	\$ (94,367)	\$ 853,889
Common stock issued for employee stock-based awards	2,212	22	19	—	—	41
Shares surrendered by employees to pay taxes related to stock-based awards	(764)	(8)	(29,199)	—	—	(29,207)
Compensation expense from stock-based awards	—	—	50,182	—	—	50,182
Excess tax benefits from stock-based awards	—	—	24	—	—	24
Net income	—	—	—	47,557	—	47,557
Repurchases of common stock	(2,728)	(27)	(64,913)	—	—	(64,940)
Foreign currency translation adjustment	—	—	—	—	(47,177)	(47,177)
Change in pension benefits, net of tax	—	—	—	—	49,802	49,802
Balance as of September 30, 2015	113,745	\$ 1,137	\$ 1,553,390	\$ (602,614)	\$ (91,742)	\$ 860,171

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

PTC Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A. Description of Business and Basis of Presentation

Business

PTC Inc. was incorporated in 1985 and is headquartered in Needham, Massachusetts. PTC Inc. develops and delivers technology solutions, comprised of software and services, that transform the way our customers create, operate and service their products for a smart, connected world. Our technology solutions are complemented by our services and support organizations, as well as third-party resellers and other strategic partners, who provide services and support to customers worldwide.

Basis of Presentation

Our fiscal year-end is September 30. The consolidated financial statements include PTC Inc. (the parent company) and its wholly owned subsidiaries, including those operating outside the U.S. All intercompany balances and transactions have been eliminated in the consolidated financial statements. In 2015, we recorded an out of period correction of approximately \$6.4 million of additional revenue that was deferred and should have been recognized previously. Management believes this correction is not material to the current period financial statements or any previously issued financial statements.

We prepare our financial statements under generally accepted accounting principles in the U.S. that require management to make estimates and assumptions that affect the amounts reported and the related disclosures. Actual results could differ from these estimates.

Reclassifications

Through 2014, we classified revenue in three categories: 1) license; 2) service; and 3) support. Effective with the beginning of the first quarter of 2015, we are reporting revenue as follows: 1) license and subscription; 2) support; and 3) professional services. License and subscription revenue includes perpetual license revenue, subscription revenue and cloud services revenue. Cloud service offerings were previously reflected in service revenue and cost of service revenue. Consulting and training service revenue and consulting and training cost of service revenue are now referred to as professional services revenue and cost of professional services revenue in the accompanying Consolidated Statements of Operations. The following revenue and costs have been reclassified in the accompanying Consolidated Statements of Operations for the year ended September 30, 2014 and 2013 to conform to the current period presentation.

	Year Ended September 30,	
	2014	2013
<i>Reclassifications within revenue</i>	(in millions)	
From Services to L&S	\$ 16.3	\$ 10.0
From Support to L&S	3.7	—
	\$ 20.0	\$ 10.0
<i>Reclassifications within cost of revenue</i>		
From Services to L&S	\$ 12.9	\$ 6.0
From Support to L&S	0.4	—
	\$ 13.3	\$ 6.0

B. Summary of Significant Accounting Policies

Foreign Currency Translation

For our non-U.S. operations where the functional currency is the local currency, we translate assets and liabilities at exchange rates in effect at the balance sheet date and record translation adjustments in stockholders' equity. For our non-U.S. operations where the U.S. dollar is the functional currency, we remeasure monetary assets and liabilities using exchange rates in effect at the balance sheet date and nonmonetary assets and liabilities at historical rates and record resulting exchange gains or losses in foreign currency net losses in the Consolidated Statements of Operations. We translate income statement amounts at average rates for the period. Transaction gains and losses are recorded in foreign currency net losses in the Consolidated Statements of Operations.

Revenue Recognition

Our sources of revenue include: (1) license and subscription, (2) support and (3) professional services. We record revenues in accordance with the guidance provided by ASC 985-605, *Software-Revenue Recognition* when the following criteria are met: (1) persuasive evidence of an arrangement exists, (2) delivery has occurred (generally, FOB shipping point or electronic distribution), (3) the fee is fixed or determinable, and (4) collection is probable. We exercise judgment and use estimates in connection with determining the amounts of software license and services revenues to be recognized in each accounting period. Our primary judgments involve the following:

- determining whether collection is probable;
- assessing whether the fee is fixed or determinable;
- determining whether service arrangements, including modifications and customization of the underlying software, are not essential to the functionality of the licensed software and thus would result in the revenue for license and service elements of an agreement being recorded separately; and
- determining the fair value of services and support elements included in multiple-element arrangements, which is the basis for allocating and deferring revenue for such services and support.

Our software is distributed primarily through our direct sales force. In addition, we have an indirect distribution channel through alliances with resellers. Revenue arrangements with resellers are recognized on a sell-through basis; that is, when we deliver the product to the end-user customer. We record consideration given to a reseller as a reduction of revenue to the extent we have recorded revenue from the reseller. We do not offer contractual rights of return, stock balancing, or price protection to our resellers, and actual product returns from them have been insignificant to date. As a result, we do not maintain reserves for reseller product returns.

At the time of each sale transaction, we must make an assessment of the collectability of the amount due from the customer. Revenue is only recognized at that time if management deems that collection is probable. In making this assessment, we consider customer credit-worthiness and historical payment experience. At that same time, we assess whether fees are fixed or determinable and free of contingencies or significant uncertainties. In assessing whether the fee is fixed or determinable, we consider the payment terms of the transaction, including transactions with payment terms that extend beyond our customary payment terms, and our collection experience in similar transactions without making concessions, among other factors. We have periodically provided financing to credit-worthy customers with payment terms up to 24 months. If the fee is determined not to be fixed or determinable, revenue is recognized only as payments become due from the customer, provided that all other revenue recognition criteria are met. Our software license arrangements generally do not include customer acceptance provisions. However, if an arrangement includes an acceptance provision, we record revenue only upon the earlier of (1) receipt of written acceptance from the customer or (2) expiration of the acceptance period.

Generally, our contracts are accounted for individually. However, when contracts are closely interrelated and dependent on each other, it may be necessary to account for two or more contracts as one to reflect the substance of the group of contracts.

License and Subscription

License and subscription revenue includes revenue from three primary sources: (1) sales of perpetual licenses, (2) subscription-based licenses, and (3) cloud services.

Under perpetual license arrangements, we generally recognize license revenue up front upon shipment to the customer. We use the residual method to recognize revenue from perpetual license software arrangements that include one or more elements to be delivered at a future date when evidence of the fair value of all undelivered elements exists, and the elements of the arrangement qualify for separate accounting as described below. Under the residual method, the fair value of the undelivered elements (i.e., support and services) based on our vendor-specific objective evidence (“VSOE”) of fair value is deferred and the remaining portion of the total arrangement fee is allocated to the delivered elements (i.e., perpetual software license). If evidence of the fair value of one or more of the undelivered elements does not exist, all revenues are deferred and recognized when delivery of all of those elements has occurred or when fair values can be established. We determine VSOE of the fair value of services and support revenue based upon our recent pricing for those elements when sold separately. For certain transactions, VSOE is determined based on a substantive renewal clause within a customer contract. Our current pricing practices are influenced primarily by product type, purchase volume, sales channel and customer location. We review services and support sold separately on a periodic basis and update, when appropriate, our VSOE of fair value for such elements to ensure that it reflects our recent pricing experience.

Subscription-based licenses include the right for a customer to use our licenses and receive related support for a specified term and revenue is recognized ratably over the term of the arrangement. When sold in arrangements with other elements, VSOE of fair value is established for the subscription-based licenses through the use of a substantive renewal clause within the customer contract for a combined annual fee that includes the term-based license and related support.

Cloud services reflect recurring revenues that include fees for hosting and application management of customers' perpetual or subscription-based licenses. Generally, customers have the right to terminate the cloud services contract and take possession of the licenses without a significant penalty. When cloud services are sold as part of a multi-element transaction, revenue is allocated to cloud services based on VSOE, and recognized ratably over the contractual term beginning on the commencement dates of each contract, which is the date the services are made available to the customer. VSOE is established for cloud services either through a substantive stated renewal option or stated contractual coverage rates, as these rates represent the value the customer is willing to pay on a standalone basis. In addition, cloud services include set-up fees, which are recognized ratably over the contract term or the expected customer life, whichever is longer.

Support

Support contracts generally include rights to unspecified upgrades (when and if available), telephone and internet-based support, updates and bug fixes. Support revenue is recognized ratably over the term of the support contract on a straight-line basis.

Professional Services

Our software arrangements often include implementation, consulting and training services that are sold under consulting engagement contracts or as part of the software license arrangement. When we determine that such services are not essential to the functionality of the licensed software, we record revenue separately for the license and service elements of these arrangements, provided that appropriate evidence of fair value exists for the undelivered services (i.e. VSOE of fair value). We consider various factors in assessing whether a service is not essential to the functionality of the software, including if the services may be provided by independent third parties experienced in providing such services (i.e. consulting and implementation) in coordination with dedicated customer personnel, and whether the services result in significant modification or customization of the software's functionality. When professional services qualify for separate accounting, professional services revenues under time and materials billing arrangements are recognized as the services are performed. Professional services revenues under fixed-priced contracts are generally recognized as the services are performed using a proportionate performance model with hours or costs as the input method of attribution.

When we provide professional services that are considered essential to the functionality of the software, the arrangement does not qualify for separate accounting of the license and service elements, and the license revenue is recognized together with the consulting services using the percentage-of-completion method of contract accounting. Under such arrangements, consideration is recognized as the services are performed as measured by an observable input. In these circumstances, we separate license revenue from service revenue for income statement presentation by allocating VSOE of fair value of the consulting services as service revenue, and the residual portion as license revenue. Under the percentage-of-completion method, we estimate the stage of completion of contracts with fixed or "not to exceed" fees based on hours or costs incurred to date as compared with estimated total project hours or costs at completion. Adjustments to estimates to complete are made in the periods in which facts resulting in a change become known. When total cost estimates exceed revenues, we accrue for the estimated losses when identified. The use of the proportionate performance and percentage-of-completion methods of accounting require significant judgment relative to estimating total contract costs or hours (hours being a proxy for costs), including assumptions relative to the length of time to complete the project, the nature and complexity of the work to be performed and anticipated changes in salaries and other costs.

Reimbursements of out-of-pocket expenditures incurred in connection with providing consulting services are included in professional services revenue, with the offsetting expense recorded in cost of professional services revenue.

Training services include on-site and classroom training. Training revenues are recognized as the related training services are provided.

Deferred Revenue

Deferred revenue primarily relates to software support agreements billed to customers for which the services have not yet been provided. The liability associated with performing these services is included in deferred revenue and, if not yet paid, the related customer receivable is included in other current assets. Billed but uncollected support and subscription-related amounts included in other current assets at September 30, 2015 and 2014 were \$129.3 million and \$116.2 million, respectively. Deferred revenue consisted of the following:

	September 30,	
	2015	2014
	(in thousands)	
Deferred license and subscription revenue	\$ 42,418	\$ 30,440
Deferred support revenue	331,793	335,827
Deferred professional services revenue	12,639	16,277
Total deferred revenue	<u>\$ 386,850</u>	<u>\$ 382,544</u>

Cash, Cash Equivalents

Our cash equivalents are invested in money market accounts and time deposits of financial institutions. We have established guidelines relative to credit ratings, diversification and maturities that are intended to maintain safety and liquidity. Cash equivalents include highly liquid investments with maturity periods of three months or less when purchased.

Concentration of Credit Risk and Fair Value of Financial Instruments

The amounts reflected in the Consolidated Balance Sheets for cash and cash equivalents, accounts receivable and accounts payable approximate their fair value due to their short maturities. Financial instruments that potentially subject us to concentration of credit risk consist primarily of investments, trade accounts receivable and foreign currency derivative instruments. Our cash, cash equivalents, and foreign currency derivatives are placed with financial institutions with high credit standings. Our credit risk for derivatives is also mitigated due to the short-term nature of the contracts. Our customer base consists of large numbers of geographically diverse customers dispersed across many industries, and no individual customer comprised more than 10% of our trade accounts receivable as of September 30, 2015 or 2014.

Fair Value Measurements

Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required to be recorded at fair value, we consider the principal or most advantageous market in which we would transact and consider assumptions that market participants would use when pricing the asset or liability, such as inherent risk, transfer restrictions, and risk of nonperformance. Generally accepted accounting principles prescribe a fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Three levels of inputs that may be used to measure fair value:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or
- Level 3: unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Our significant financial assets and liabilities measured at fair value on a recurring basis as of September 30, 2015 and 2014 were as follows:

September 30, 2015

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
	(in thousands)			
Financial assets:				
Cash equivalents (1)	\$ 91,216	\$ —	\$ —	\$ 91,216
Forward contracts	—	507	—	507
	<u>\$ 91,216</u>	<u>\$ 507</u>	<u>\$ —</u>	<u>\$ 91,723</u>
Financial liabilities:				
Contingent consideration related to ThingWorx & ColdLight acquisitions	\$ —	\$ —	\$ 13,000	\$ 13,000
Forward contracts	—	46	—	46
	<u>\$ —</u>	<u>\$ 46</u>	<u>\$ 13,000</u>	<u>\$ 13,046</u>

September 30, 2014

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
	(in thousands)			
Financial assets:				
Cash equivalents (1)	\$ 101,113	\$ —	\$ —	\$ 101,113
Forward contracts	—	339	—	339
	<u>\$ 101,113</u>	<u>\$ 339</u>	<u>\$ —</u>	<u>\$ 101,452</u>
Financial liabilities:				
Contingent consideration related to ThingWorx acquisition	\$ —	\$ —	\$ 15,191	\$ 15,191
Forward contracts	—	911	—	911
	<u>\$ —</u>	<u>\$ 911</u>	<u>\$ 15,191</u>	<u>\$ 16,102</u>

(1) Money market funds and time deposits.

For a description of the inputs used to value the contingent consideration liability see Note E *Acquisitions*. Changes in the fair value of Level 3 contingent consideration liability associated with our acquisitions of ThingWorx and ColdLight were as follows:

	<u>Contingent Consideration</u>	
	(in thousands)	
	<u>ThingWorx</u>	<u>ColdLight</u>
Balance at October 1, 2013	—	—
Contingent consideration at acquisition	13,048	—
Change in fair value of contingent consideration	2,143	—
Balance at October 1, 2014	<u>15,191</u>	<u>—</u>
Contingent consideration at acquisition	—	3,800
Change in fair value of contingent consideration	2,809	200
Payment of contingent consideration	(9,000)	—
Balance at September 30, 2015	<u>\$ 9,000</u>	<u>\$ 4,000</u>

Allowance for Doubtful Accounts

We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. In determining the adequacy of the allowance for doubtful accounts, management specifically analyzes individual accounts receivable, historical bad debts, customer concentrations, customer credit-worthiness, current economic conditions, and accounts receivable aging trends. Our allowance for doubtful accounts on trade accounts receivable was \$1.0 million as of September 30, 2015, \$1.6 million as of September 30, 2014, \$3.0 million as of September 30, 2013 and \$3.4

million as of September 30, 2012. Uncollectible trade accounts receivable written-off, net of recoveries, were \$0.8 million, \$0.6 million and \$0.6 million in 2015, 2014 and 2013, respectively. Bad debt (credit) expense was \$0.2 million, \$(0.8) million and \$0.2 million in 2015, 2014 and 2013, respectively, and is included in general and administrative expenses in the accompanying Consolidated Statements of Operations.

Financing Receivables and Transfers of Financial Assets

We periodically provide extended payment terms for software purchases to credit-worthy customers with payment terms up to 24 months. The determination of whether to offer such payment terms is based on the size, nature and credit-worthiness of the customer, and the history of collecting amounts due, without concession, from the customer and customers generally. This determination is based on an internal credit assessment. In making this assessment, we use the Standard & Poor's (S&P) credit rating as our primary credit quality indicator, if available. If a customer, including both commercial and U.S. Federal government, has an S&P bond rating of BBB- or above, we designate the customer as a Tier 1. If a customer does not have an S&P bond rating, or has a S&P bond rating below BBB-, we base our assessment on an internal credit assessment which considers selected balance sheet, operating and liquidity measures, historical payment experience, and current business conditions within the industry or region. We designate these customers as Tier 2 or Tier 3, with Tier 3 being lower credit quality than Tier 2.

As of September 30, 2015 and 2014, amounts due from customers for contracts with original payment terms greater than twelve months (financing receivables) totaled \$27.4 million and \$58.1 million, respectively. Accounts receivable and other current assets in the accompanying Consolidated Balance Sheets include current receivables from such contracts totaling \$21.8 million and \$44.6 million at September 30, 2015 and 2014, respectively, and other assets in the accompanying Consolidated Balance Sheets include long-term receivables from such contracts totaling \$5.6 million and \$13.5 million at September 30, 2015 and 2014, respectively. As of September 30, 2015 and September 30, 2014, respectively, \$0.5 million and \$0 of these receivables were past due. Our credit risk assessment for financing receivables was as follows:

	<u>September 30,</u>	
	<u>2015</u>	<u>2014</u>
	(in thousands)	
S&P bond rating BBB- and above-Tier 1	\$ 16,841	\$ 41,152
Internal Credit Assessment-Tier 2	10,593	16,989
Internal Credit Assessment-Tier 3	—	—
Total financing receivables	<u>\$ 27,434</u>	<u>\$ 58,141</u>

We evaluate the need for an allowance for doubtful accounts for estimated losses resulting from the inability of these customers to make required payments. We write off uncollectible trade and financing receivables when we have exhausted all collection avenues. As of September 30, 2015 and 2014, we concluded that all financing receivables were collectible and no reserve for credit losses was recorded. We did not provide a reserve for credit losses or write off any uncollectible financing receivables in 2015, 2014 and 2013.

We periodically transfer future payments under certain of these contracts to third-party financial institutions on a non-recourse basis. We record such transfers as sales of the related accounts receivable when we surrender control of such receivables. In 2015, 2014 and 2013, we sold \$3.0 million, \$24.5 million and \$17.0 million, respectively, of financing receivables to third-party financial institutions.

Derivatives

Generally accepted accounting principles require all derivatives, whether designated in a hedging relationship or not, to be recorded on the balance sheet at fair value. Changes in the derivative's fair value are recognized currently in earnings unless specific hedge accounting criteria are met.

Derivatives are financial instruments whose values are derived from one or more underlying financial instruments, such as foreign currency. We enter into derivative transactions, specifically foreign currency forward contracts, to manage our exposure to fluctuations in foreign exchange rates that arise primarily from our foreign currency-denominated receivables and payables. The contracts are primarily denominated in European currencies, typically have maturities of approximately three months or less and require an exchange of foreign currencies for U.S. dollars at maturity of the contracts at rates agreed to at inception of the contracts. We do not enter into or hold derivatives for trading or speculative purposes. Generally, we do not designate foreign currency forward contracts as hedges for accounting purposes, and changes in the fair value of these

instruments are recognized immediately in earnings. Because we enter into forward contracts only as an economic hedge, any gain or loss on the underlying foreign-denominated balance would be offset by the loss or gain on the forward contract. Gains and losses on forward contracts and foreign denominated receivables and payables are included in foreign currency net losses.

As of September 30, 2015 and 2014, we had outstanding forward contracts with notional amounts equivalent to the following:

Currency Hedged	September 30,	
	2015	2014
	(in thousands)	
Canadian/U.S. Dollar	\$ 17,448	\$ 25,583
Euro/U.S. Dollar	82,917	61,751
British Pound/Euro	9,409	14,259
Israeli Sheqel/U.S. Dollar	4,607	6,144
Japanese Yen/Euro	25,133	—
Swiss Franc/U.S. Dollar	5,149	1,200
All other	12,592	8,051
Total	<u>\$ 157,255</u>	<u>\$ 116,988</u>

The accompanying Consolidated Balance Sheets include net assets of \$0.5 million and \$0.3 million in other current assets as of September 30, 2015 and 2014, respectively and a net liability of \$46.0 thousand and \$0.9 million in accrued expenses and other current liabilities as of September 30, 2015 and 2014, respectively, related to the fair value of our forward contracts.

Net gains and losses on foreign currency exposures, including realized and unrealized gains and losses on forward contracts, included in foreign currency net losses, were net losses of \$2.7 million, \$4.5 million and \$2.0 million for 2015, 2014 and 2013, respectively. Excluding the underlying foreign currency exposure being hedged, net realized and unrealized gains and losses on forward contracts included in foreign currency net losses, were a net gain of \$0.6 million in 2015, a net loss of \$3.8 million in 2014, and a net gain of \$3.4 million in 2013.

Property and Equipment

Property and equipment are recorded at cost and depreciated using the straight-line method over their estimated useful lives. Computer hardware and software are typically amortized over three to five years, and furniture and fixtures over three to eight years. Leasehold improvements are amortized over the shorter of their useful lives or the remaining terms of the related leases. Property and equipment under capital leases are amortized over the lesser of the lease terms or their estimated useful lives. Maintenance and repairs are charged to expense when incurred; additions and improvements are capitalized. When an item is sold or retired, the cost and related accumulated depreciation is relieved, and the resulting gain or loss, if any, is recognized in income.

Software Development Costs

We incur costs to develop computer software to be licensed or otherwise marketed to customers. Research and development costs are expensed as incurred, except for costs of internally developed or externally purchased software that qualify for capitalization. Development costs for software to be sold externally incurred subsequent to the establishment of technological feasibility, but prior to the general release of the product, are capitalized and, upon general release, are amortized using the greater of either the straight-line method over the expected life of the related products or based upon the pattern in which economic benefits related to such assets are realized. The straight-line method is used if it approximates the same amount of expense as that calculated using the ratio that current period gross product revenues bear to total anticipated gross product revenues. No development costs for software to be sold externally were capitalized in 2015, 2014 or 2013. In connection with acquisitions of businesses described in Note E, we capitalized software of \$13.6 million and \$48.9 million in 2015 and 2014, respectively. These assets are included in acquired intangible assets in the accompanying Consolidated Balance Sheets.

Goodwill, Acquired Intangible Assets and Long-lived Assets

Goodwill is the amount by which the purchase price in a business acquisition exceeds the fair values of net identifiable assets on the date of purchase.

Goodwill is evaluated for impairment annually, as of the end of the third quarter, or more frequently if events or changes in circumstances indicate that the asset might be impaired. Factors we consider important, on an overall company basis and reportable-segment basis, when applicable, that could trigger an impairment review include significant underperformance relative to historical or projected future operating results, significant changes in our use of the acquired assets or the strategy for our overall business, significant negative industry or economic trends, a significant decline in our stock price for a sustained period and a reduction of our market capitalization relative to net book value. We completed our annual goodwill impairment review as of July 4, 2015 and concluded that no impairment charge was required as of that date. To conduct these tests of goodwill, the fair value of the reporting unit is compared to its carrying value. If the reporting unit's carrying value exceeds its fair value, we record an impairment loss equal to the difference between the carrying value of goodwill and its implied fair value. We estimate the fair values of our reporting units using discounted cash flow valuation models. Those models require estimates of future revenues, profits, capital expenditures, working capital, terminal values based on revenue multiples, and discount rates for each reporting unit. We estimate these amounts by evaluating historical trends, current budgets, operating plans and industry data. The estimated fair value of each reporting unit was more than double its carrying value as of July 4, 2015.

Long-lived assets primarily include property and equipment and acquired intangible assets with finite lives (including purchased software, customer lists and trademarks). Purchased software is amortized over periods up to 11 years, customer lists are amortized over periods up to 12 years and trademarks are amortized over periods up to 12 years. We review long-lived assets for impairment when events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable or that the useful lives of those assets are no longer appropriate. Each impairment test is based on a comparison of the undiscounted cash flows to the recorded value of the asset or asset group. If impairment is indicated, the asset is written down to its estimated fair value based on a discounted cash flow analysis.

Advertising Expenses

Advertising costs are expensed as incurred. Total advertising expenses incurred were \$1.1 million, \$2.2 million and \$4.2 million in 2015, 2014 and 2013, respectively.

Income Taxes

Our income tax expense includes U.S. and international income taxes. Certain items of income and expense are not reported in tax returns and financial statements in the same year. The tax effects of these differences are reported as deferred tax assets and liabilities. Deferred tax assets are recognized for the estimated future tax effects of deductible temporary differences and tax operating loss and credit carryforwards. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. We assess the likelihood that our deferred tax assets will be recovered from future taxable income and, to the extent we believe that it is more likely than not that all or a portion of deferred tax assets will not be realized, we establish a valuation allowance. To the extent we establish a valuation allowance or increase this allowance in a period, we include an expense within the tax provision in the Consolidated Statements of Operations.

Comprehensive Income (Loss)

Comprehensive income (loss) consists of net income (loss) and other comprehensive income (loss), which includes foreign currency translation adjustments and changes in unrecognized actuarial gains and losses (net of tax) related to pension benefits. For the purposes of comprehensive income disclosures, we do not record tax provisions or benefits for the net changes in the foreign currency translation adjustment, as we intend to reinvest permanently undistributed earnings of our foreign subsidiaries. Accumulated other comprehensive loss is reported as a component of stockholders' equity and, as of September 30, 2015 and 2014, was comprised of cumulative translation adjustment losses of \$71.6 million and \$24.5 million, respectively, and unrecognized actuarial losses related to pension benefits of \$28.3 million (\$20.1 million net of tax) and \$95.9 million (\$69.9 million net of tax), respectively.

Earnings per Share (EPS)

Basic EPS is calculated by dividing net income by the weighted average number of shares outstanding during the period. Unvested restricted shares, although legally issued and outstanding, are not considered outstanding for purposes of calculating basic earnings per share. Diluted EPS is calculated by dividing net income by the weighted average number of shares outstanding plus the dilutive effect, if any, of outstanding stock options, restricted shares and restricted stock units using the treasury stock method. The calculation of the dilutive effect of outstanding equity awards under the treasury stock method includes consideration of proceeds from the assumed exercise of stock options, unrecognized compensation expense and any tax benefits as additional proceeds.

The following table presents the calculation for both basic and diluted EPS:

	Year ended September 30,		
	2015	2014	2013
	(in thousands, except per share data)		
Net income	\$ 47,557	\$ 160,194	\$ 143,769
Weighted average shares outstanding	114,775	118,094	119,473
Dilutive effect of employee stock options, restricted shares and restricted stock units	1,237	1,890	1,767
Diluted weighted average shares outstanding	116,012	119,984	121,240
Basic earnings per share	\$ 0.41	\$ 1.36	\$ 1.20
Diluted earnings per share	\$ 0.41	\$ 1.34	\$ 1.19

Stock-Based Compensation

We measure the compensation cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award. That cost is recognized over the period during which an employee is required to provide service in exchange for the award. See Note K for a description of the types of stock-based awards granted, the compensation expense related to such awards and detail of equity-based awards outstanding. See Note G for detail of the tax benefit recognized in the Consolidated Statements of Operations related to stock-based compensation.

Related Party Transaction

On November 27, 2013, we entered into a consulting agreement with Professor Michael Porter, who was a director of PTC at the time. In consideration for providing consulting services, we made a restricted stock unit grant valued at approximately \$0.2 million (6,213 shares) to Professor Porter, half of which vested on November 15, 2014 and the other half of which vested on March 4, 2015. Professor Porter earned \$240,000 in fees for participation in strategy events on behalf of PTC under the agreement. The agreement and Professor Porter's tenure as director ended on March 4, 2015.

Recent Accounting Pronouncements

Revenue Recognition

In May 2014, the Financial Accounting Standards Board (the FASB) issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers: Topic 606 (ASU 2014-09), to supersede nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing U.S. GAAP including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 is effective for us in our first quarter of fiscal 2018 using either of two methods: (i) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within ASU 2014-09; or (ii) retrospective with the cumulative effect of initially applying ASU 2014-09 recognized at the date of initial application and providing certain additional disclosures as defined per ASU 2014-09. We are currently evaluating the impact of our pending adoption of ASU 2014-09 on our consolidated financial statements.

Debt Issuance Costs

In April 2015, the FASB issued ASU No. 2015-03, Interest-Imputation of Interest (Subtopic 835-30), to simplify the required presentation of debt issuance costs. The amended guidance requires that debt issuance costs be presented in the balance sheet as a direct reduction from the carrying amount of the related debt liability rather than as an asset. It is effective for financial statements issued for fiscal years beginning after December 15, 2015, our fiscal 2017, with early adoption permitted. The new guidance will be applied retrospectively to each prior period presented. We are currently evaluating the impact of the new guidance on our consolidated financial statements.

C. Restructuring Charges

On April 4, 2015, we committed to a plan to restructure our workforce and consolidate select facilities to realign our global workforce to increase investment in our Internet of Things business and to reduce our cost structure through

organizational efficiencies in the face of significant foreign currency depreciation relative to the U.S. Dollar and a more cautious outlook on global macroeconomic conditions. In 2015, we recorded restructuring charges of \$42.0 million attributable to severance and related costs associated with 411 employees. Additionally, we recorded a charge of \$1.4 million related to the closure of excess facilities. The facility charge reflects estimated costs including gross lease commitments of approximately \$2.3 million, net of estimated sublease income of \$0.9 million. As of September 30, 2015, this restructuring plan was substantially completed.

In September 2014, in support of integrating businesses acquired and the continued evolution of our business model, we committed to a plan to restructure our workforce. As a result, we recorded a restructuring charge of \$26.8 million associated with severance and related costs associated with 283 employees. Additionally, in 2014, we recorded restructuring charges of \$1.6 million, primarily associated with the completion of the restructuring actions initiated in the fourth quarter of 2013.

During 2013, as part of our ongoing strategy to reduce costs and improve profitability, we implemented restructuring actions and recorded restructuring charges of \$52.2 million (including \$52.4 million related to 2013 actions, net of a \$0.2 million credit related to prior period restructuring reserves). The 2013 restructuring charges included \$51.0 million for severance and related costs associated with 553 employees and \$1.5 million of charges related to excess facilities.

The following table summarizes restructuring charges reserve activity for the three years ended September 30, 2015:

	<u>Employee Severance and Related Benefits</u>	<u>Facility Closures and Other Costs</u>	<u>Consolidated Total</u>
	(in thousands)		
Balance, October 1, 2012	\$ 3,798	\$ 663	\$ 4,461
Charges to operations	50,874	1,323	52,197
Cash disbursements	(35,510)	(1,689)	(37,199)
Foreign currency impact	72	(2)	70
Balance, September 30, 2013	<u>19,234</u>	<u>295</u>	<u>19,529</u>
Charges to operations	27,918	488	28,406
Cash disbursements	(20,334)	(241)	(20,575)
Foreign currency impact	(983)	(7)	(990)
Balance, September 30, 2014	<u>25,835</u>	<u>535</u>	<u>26,370</u>
Charges to operations	41,997	1,412	43,409
Cash disbursements	(52,882)	(706)	(53,588)
Foreign currency impact	(864)	(73)	(937)
Balance, September 30, 2015	<u>\$ 14,086</u>	<u>\$ 1,168</u>	<u>\$ 15,254</u>

The accrual for facility closures and related costs is included in accrued expenses and other current liabilities in the Consolidated Balance Sheets, and the accrual for employee severance and related benefits is included in accrued compensation and benefits in the Consolidated Balance Sheets.

D. Property and Equipment

Property and equipment consisted of the following:

	September 30,	
	2015	2014
	(in thousands)	
Computer hardware and software	\$ 246,756	\$ 230,591
Furniture and fixtures	18,370	19,025
Leasehold improvements	38,005	36,896
Gross property and equipment	303,131	286,512
Accumulated depreciation and amortization	(237,969)	(218,729)
Net property and equipment	\$ 65,162	\$ 67,783

Depreciation expense was \$28.9 million, \$27.1 million and \$31.5 million in 2015, 2014 and 2013, respectively.

E. Acquisitions

In 2015, we completed the acquisition of ColdLight (on May 7, 2015), and in 2014, we completed the acquisitions of Axeda (on August 11, 2014), Atego (on June 30, 2014) and ThingWorx (on December 30, 2013). The results of operations of these acquired businesses have been included in our consolidated financial statements beginning on their respective acquisition dates.

These acquisitions have been accounted for as business combinations. Assets acquired and liabilities assumed have been recorded at their estimated fair values as of the respective acquisition date. The fair values of intangible assets were based on valuations using an income approach, with estimates and assumptions provided by management of the acquired companies and PTC. The process for estimating the fair values of identifiable intangible assets as well as the ColdLight and ThingWorx contingent consideration liabilities requires the use of significant estimates and assumptions, including estimating future cash flows and developing appropriate discount rates. The excess of the purchase price over the tangible assets, identifiable intangible assets and assumed liabilities was recorded as goodwill.

In accounting for these business combinations, we recorded net deferred tax liabilities of \$21.6 million in 2014 primarily related to the tax effect of the acquired intangible assets other than goodwill that are not deductible for income tax purposes, partially offset by net operating loss carryforwards. As described in Note G, these net deferred tax liabilities reduced our net deferred tax asset balance and resulted in a tax benefit to decrease our valuation allowance in the U.S. and the U.K.

Acquisition-related costs were \$8.9 million, \$12.7 million and \$9.9 million in 2015, 2014 and 2013, respectively. Acquisition-related costs include direct costs of completing an acquisition (e.g., investment banker fees and professional fees, including legal and valuation services) and expenses related to acquisition integration activities (e.g., professional fees, severance, and retention bonuses). In addition, subsequent adjustments to our initial estimated amounts of ColdLight and ThingWorx contingent consideration, primarily net present value changes, are included within acquisition-related charges. These costs have been classified in general and administrative expenses in the accompanying Consolidated Statements of Operations.

2015 Acquisition

ColdLight

On May 7, 2015, we acquired all of the ownership interest of ColdLight Solutions, LLC, a company that offered solutions for data machine learning and predictive analytics, for approximately \$98.6 million in cash (net of cash acquired of \$1.3 million).

The acquisition of the ColdLight automated predictive analytics platform will expand our technology portfolio in the Internet of Things (IoT) market. At the time of the acquisition, ColdLight had approximately 60 employees and annualized revenues which were immaterial to our financial results.

The former shareholders of ColdLight are eligible to receive additional consideration (the earn-out) of up to \$5.0 million, which is contingent upon achievement of certain technology milestones within two years of the acquisition. If an earn-out milestone is achieved, a portion of the contingent consideration becomes earned and payable in cash after each six-month period. In connection with accounting for the business combination, we recorded a liability of \$3.8 million, representing the fair value of the contingent consideration. The liability was valued using a discounted cash flow method and a probability weighted estimate of achievement of the technology milestones. The estimated undiscounted range of outcomes for the contingent consideration was \$3.8 million to \$5.0 million at the acquisition date. As of September 30, 2015, our estimate of the liability was increased to \$4.0 million. We will continue to assess the probability that the unearned milestones will be met and

at what level each reporting period. The subsequent changes in the estimated fair value of the liability are reflected in earnings until the liability is fully settled.

The total purchase price for ColdLight was allocated to assets and liabilities acquired as follows:

	(in thousands)
Purchase price allocation:	
Goodwill	\$ 85,288
Identifiable intangible assets	17,620
Cash	1,313
Other assets and liabilities, net	(516)
Total allocation of purchase price consideration	<u>103,705</u>
Less: cash acquired	(1,313)
Total purchase price allocation, net of cash acquired	<u>102,392</u>
Less: contingent consideration	(3,800)
Net cash used to acquire ColdLight	<u><u>\$ 98,592</u></u>

The purchase price allocation resulted in \$85.3 million of goodwill, which will be deductible for income tax purposes. All of the acquired goodwill was allocated to our software products segment. Intangible assets of \$17.6 million includes purchased software of \$13.6 million, customer relationships of \$3.5 million and trademarks of \$0.5 million, which are being amortized over weighted average useful lives of 10 years, 9 years and 7 years, respectively, based upon the pattern in which economic benefits related to such assets are expected to be realized.

The resulting amount of goodwill reflects our expectations of the following benefits: (1) ColdLight provides a differentiated machine learning platform for critical data analytics in our solution portfolio; (2) ColdLight's Neuron[®] product suite can automate the analytics process, reducing the dependency on manual processes; (3) ColdLight is addressing challenging aspects of data analytics aligned with the PTC / ThingWorx analytics vision; (4) ColdLight has a presence in industries outside of PTC's traditional markets which create a foundation for us to pursue opportunities in non-traditional vertical markets.

2014 Acquisitions

Axeda and Atego

In the fourth quarter of 2014, we acquired all of the outstanding shares of capital stock of Axeda (a privately-held U.S.-based company) and Atego Group Limited (a privately-held company with operations in the U.K., the U.S. and France) for a total of \$212.0 million, net of 13.1 million of cash acquired. The acquisitions resulted in goodwill of \$157.7 million, intangible assets of \$86.9 million and deferred tax liabilities related to the intangible assets of \$12.6 million. Our results of operations prior to these acquisitions, if presented on a proforma basis, would not differ materially from our reported results.

ThingWorx

In the second quarter of 2014, we acquired ThingWorx, Inc. for \$111.5 million (net of cash acquired of \$0.1 million). The former shareholders of ThingWorx are eligible to receive additional consideration (the earn-out) of up to \$18.0 million if certain profitability and bookings targets are achieved within two years of the acquisition from December 30, 2013 to January 1, 2016. The earn-out is payable in cash in two installments after each measurement period. In connection with accounting for the business combination, we recorded a liability representing the fair value of the contingent consideration. The liability was valued using a discounted cash flow method and a probability weighted estimate of achievement the financial targets. We assess the probability that the targets will be met each reporting period. Any subsequent changes in the estimated fair value of the liability are reflected in earnings until the liability is fully settled.

The ThingWorx contingent consideration first year payment criteria were attained. As such, \$9.0 million of the total contingent consideration was paid in July 2015. Of the \$9.0 million payment, \$4.3 million represents the fair value of the first installment payment at acquisition date and is included in financing activities in the Consolidated Statements of Cash Flows. The remaining \$4.7 million payment is included in operating activities in the Consolidated Statements of Cash Flows. As of September 30, 2015, we expect that the remaining \$9.0 million of the total contingent consideration will be fully earned and become payable in 2016.

2013 Acquisition

Servigistics

On October 2, 2012, we acquired all of the outstanding shares of capital stock of Servigistics, Inc. (a privately held

developer of a suite of service life cycle management (SLM) software solutions) for \$220.8 million in cash, net of \$1.4 million cash acquired. We acquired Servigistics to expand our products that support service organizations within manufacturing companies, including managing service and spare parts information and the delivery of service for warranty and product support processes. Servigistics had annualized revenues of approximately \$80.0 million and approximately 400 employees.

The unaudited financial information in the table below summarizes the combined results of operations of PTC and Servigistics, on a pro forma basis, as though the companies had been combined as of the beginning of PTC's fiscal year 2013. The pro forma information for the period presented includes the effects of business combination accounting resulting from the acquisition as though the acquisition had been consummated as of the beginning of fiscal year 2013, including amortization charges from acquired intangible assets, the fair value adjustment of acquired deferred support revenue being recorded, interest expense on borrowings in connection with the acquisition, the exclusion of acquisition-related costs and the related tax effects. In 2013, we recorded a tax benefit of \$32.6 million to decrease our valuation allowance as a result of Servigistics' net deferred tax liabilities recorded in accounting for the business combination. This tax benefit is excluded from the 2013 pro forma results. The pro forma financial information is presented for comparative purposes only and is not necessarily indicative of the results of operations that actually would have been achieved if the acquisition had taken place at the beginning of 2013.

Unaudited Pro Forma Financial Information

	Year ended September 30, 2013	
	(in millions, except per share amounts)	
Revenue	\$	1,296.6
Net income	\$	116.5
Earnings per share—Basic	\$	0.98
Earnings per share—Diluted	\$	0.96

F. Goodwill and Acquired Intangible Assets

We have two reportable segments: (1) Software Products and (2) Services. As of September 30, 2015 and 2014, goodwill and acquired intangible assets in the aggregate attributable to our software products segment was \$1,297.9 million and \$1,283.0 million, respectively, and attributable to our services segment was \$62.4 million and \$66.4 million, respectively. Goodwill is tested for impairment at least annually, or on an interim basis if an event occurs or circumstances change that would, more likely than not, reduce the fair value of the reporting segment below its carrying value. We completed our annual goodwill impairment review as of July 4, 2015 and concluded that no impairment charge was required as of that date. To conduct these tests of goodwill, the fair value of the reporting unit is compared to its carrying value. If the reporting unit's carrying value exceeds its fair value, we record an impairment loss equal to the difference between the carrying value of goodwill and its implied fair value. We estimate the fair values of our reporting units using discounted cash flow valuation models. Those models require estimates of future revenues, profits, capital expenditures, working capital, terminal values based on revenue multiples, and discount rates for each reporting unit. We estimate these amounts by evaluating historical trends, current budgets, operating plans and industry data. The estimated fair value of each reporting unit was more than double its carrying value as of July 4, 2015. Through September 30, 2015, there have not been any events or changes in circumstances that indicate that the carrying values of goodwill or acquired intangible assets may not be recoverable.

Goodwill and acquired intangible assets consisted of the following:

	September 30, 2015			September 30, 2014		
	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
	(in thousands)					
Goodwill (not amortized)			\$ 1,069,041			\$ 1,012,527
Intangible assets with finite lives (amortized) (1):						
Purchased software	\$ 284,257	\$ 174,887	\$ 109,370	\$ 278,012	\$ 162,259	\$ 115,753
Capitalized software	22,877	22,877	—	22,877	22,877	—
Customer lists and relationships	349,938	174,017	175,921	360,530	147,469	213,061
Trademarks and trade names	18,534	12,759	5,775	18,479	10,964	7,515
Other	3,946	3,711	235	4,117	3,573	544
	<u>\$ 679,552</u>	<u>\$ 388,251</u>	<u>\$ 291,301</u>	<u>\$ 684,015</u>	<u>\$ 347,142</u>	<u>\$ 336,873</u>
Total goodwill and acquired intangible assets			<u>\$ 1,360,342</u>			<u>\$ 1,349,400</u>

(1) The weighted average useful lives of purchased software, customer lists and relationships, trademarks and trade names and other intangible assets with a remaining net book value are 9 years, 10 years, 10 years and 3 years, respectively.

The changes in the carrying amounts of goodwill from October 1, 2014 to September 30, 2015 are due to the impact of acquisitions (described in Note E) and to foreign currency translation adjustments related to those asset balances that are recorded in non-U.S. currencies.

Changes in goodwill presented by reportable segment were as follows:

	Software Products Segment	Services Segment	Total
	(in thousands)		
Balance, October 1, 2013	\$ 720,548	\$ 48,547	\$ 769,095
Acquisition of ThingWorx	102,190	—	102,190
Acquisition of Atego	27,256	—	27,256
Acquisition of Axeda	126,034	4,409	130,443
Foreign currency translation	(16,260)	(197)	(16,457)
Balance, September 30, 2014	<u>\$ 959,768</u>	<u>\$ 52,759</u>	<u>\$ 1,012,527</u>
Axeda adjustment of purchase price from escrow	(180)	—	(180)
Acquisition of ColdLight	85,288	—	85,288
Foreign currency translation adjustments	(28,463)	(131)	(28,594)
Balance, September 30, 2015	<u>\$ 1,016,413</u>	<u>\$ 52,628</u>	<u>\$ 1,069,041</u>

The aggregate amortization expense for intangible assets with finite lives recorded for the years ended September 30, 2015, 2014 and 2013 was reflected in our Consolidated Statements of Operations as follows:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Amortization of acquired intangible assets	\$ 36,129	\$ 32,127	\$ 26,486
Cost of license and subscription revenue	19,402	18,112	18,586
Total amortization expense	<u>\$ 55,531</u>	<u>\$ 50,239</u>	<u>\$ 45,072</u>

The estimated aggregate future amortization expense for intangible assets with finite lives remaining as of September 30, 2015 is \$49.9 million for 2016, \$47.8 million for 2017, \$46.1 million for 2018, \$38.4 million for 2019, \$35.4 million for 2020, and \$73.7 million thereafter.

G. Income Taxes

Our income (loss) before income taxes consisted of the following:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Domestic	\$ (110,867)	\$ 17,038	\$ 6,112
Foreign	137,392	169,074	120,122
Total income before income taxes	<u>\$ 26,525</u>	<u>\$ 186,112</u>	<u>\$ 126,234</u>

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

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Current:			
Federal	\$ 3,907	\$ 12,792	\$ 7,081
State	599	2,062	1,512
Foreign	23,823	31,010	13,586
	<u>28,329</u>	<u>45,864</u>	<u>22,179</u>
Deferred:			
Federal	(20,809)	(13,200)	(38,224)
State	(566)	(2,085)	(4,718)
Foreign	(27,986)	(4,661)	3,228
	<u>(49,361)</u>	<u>(19,946)</u>	<u>(39,714)</u>
Total provision (benefit) for income taxes	<u>\$ (21,032)</u>	<u>\$ 25,918</u>	<u>\$ (17,535)</u>

The reconciliation between the statutory federal income tax rate and our effective income tax rate is shown below:

	Year ended September 30,		
	2015	2014	2013
Statutory federal income tax rate	35 %	35 %	35 %
Change in valuation allowance	63 %	(11)%	(32)%
State income taxes, net of federal tax benefit	7 %	1 %	1 %
Federal and state research and development credits	(8)%	— %	(1)%
Resolution of uncertain tax positions	(11)%	— %	(1)%
Foreign rate differences	(213)%	(19)%	(26)%
Foreign withholding tax	14 %	3 %	5 %
U.S. permanent items	34 %	4 %	5 %
Other, net	— %	1 %	— %
Effective income tax rate	<u>(79)%</u>	<u>14 %</u>	<u>(14)%</u>

In 2015, our effective tax rate was a benefit of 79% on pre-tax income of \$26.5 million. Our effective tax rate was lower than the 35% statutory federal income tax rate due, in large part, to our corporate structure in which our foreign taxes are at an effective tax rate lower than the U.S. A significant amount of our foreign earnings is generated by our subsidiaries organized in Ireland. In 2015, 2014 and 2013, the foreign rate differential predominantly relates to these Irish earnings. Our foreign rate differential in 2015 includes a rate benefit from a business realignment completed on September 30, 2014 in which intellectual property was transferred between two wholly-owned foreign subsidiaries. The realignment allows us to more efficiently manage the distribution of our products to European customers. In 2015, this realignment resulted in a tax benefit of approximately \$24.0 million. U.S. permanent items include the tax effect of a \$14.5 million expense related to a pending legal settlement. Other factors impacting the effective tax rate include: the release of a valuation allowance totaling \$18.7 million relating to the U.S. pension plan termination, foreign withholding taxes of \$3.8 million, a tax benefit of \$3.1 million relating to

the reassessment of our reserve requirements and a benefit of \$1.4 million in conjunction with the reorganization of our Atego U.S. subsidiaries. Additionally, our provision reflects a \$2.1 million tax benefit related to a retroactive extension of the U.S. research and development tax credit enacted in the first quarter of 2015. This benefit was offset by a corresponding provision to increase our U.S. valuation allowance.

In 2014, our effective tax rate was a provision of 14% on pre-tax income of \$186.1 million. Our effective tax rate was lower than the 35% statutory federal income tax rate due, in large part, to the reversal of a portion of the valuation allowance against U.S. deferred tax assets. We recorded benefits resulting from 2014 acquisitions as described below. Other factors impacting the effective tax rate include: our corporate structure in which our foreign taxes are at an effective tax rate lower than the U.S. rate, foreign withholding taxes of \$5.1 million and the establishment of a valuation allowance totaling \$3.5 million in two foreign subsidiaries.

In 2013, our effective tax rate was a benefit of 14% on pre-tax income of \$126.2 million. Our effective tax rate was lower than the 35% statutory federal income tax rate due, in large part, to the reversal of a portion of the valuation allowance against deferred tax assets (primarily the U.S.). We recorded benefits resulting from 2013 acquisitions as described below, and a benefit of \$7.9 million related to the release of a valuation allowance as a result of a pension gain recorded in accumulated other comprehensive income in equity. Additionally, our 2013 tax provision reflects a \$2.0 million provision related to a research and development (R&D) cost sharing prepayment by a foreign subsidiary to the U.S. A similar prepayment was made in 2012 resulting in a \$7.8 million provision in that year. This impact is included in foreign rate differences in our effective tax rate reconciliation above. This impact was offset by a corresponding increase in our valuation allowance in the U.S. Other factors impacting the rate include: our corporate structure in which our foreign taxes are at an effective tax rate lower than the U.S. rate, foreign withholding taxes of \$6.0 million and non-cash tax benefits of \$5.3 million, included in foreign rate differences, recorded as a result of the conclusion of tax audits in several foreign jurisdictions.

Acquisitions in 2014 and 2013 were accounted for as business combinations. Assets acquired, including the fair value of acquired tangible assets, intangible assets and assumed liabilities were recorded, and we recorded net deferred tax liabilities of \$21.6 million and \$38.7 million in 2014 and 2013, respectively, primarily related to the tax effect of the acquired intangible assets that are not deductible for income tax purposes. These deferred tax liabilities reduced our net deferred tax asset balance and resulted in a tax benefit of \$18.1 million and \$36.7 million in 2014 and 2013, respectively, to decrease our valuation allowance in jurisdictions where we have recorded a valuation allowance (primarily the U.S.). As these decreases in the valuation allowance are not part of the accounting for business combinations (the fair value of the assets acquired and liabilities assumed), they were recorded as an income tax benefit.

At September 30, 2015 and 2014, income taxes payable and income tax accruals recorded in accrued income taxes, other current liabilities, and other liabilities on the accompanying Consolidated Balance Sheets were \$14.7 million (\$4.0 million in accrued income taxes, \$2.2 million in other current liabilities and \$8.5 million in other liabilities) and \$17.7 million (\$9.3 million in accrued income taxes, \$1.3 million in other current liabilities and \$7.1 million in other liabilities), respectively. At September 30, 2015 and 2014, prepaid taxes recorded in prepaid expenses on the accompanying Consolidated Balance Sheets were \$8.2 million and \$6.3 million, respectively. We made net income tax payments of \$30.1 million, \$25.5 million and \$35.4 million in 2015, 2014 and 2013, respectively.

The significant temporary differences that created deferred tax assets and liabilities are shown below:

September 30,	
2015	2014
(in thousands)	

Deferred tax assets:		
Net operating loss carryforwards	\$ 71,533	\$ 57,677
Foreign tax credits	15,962	9,022
Capitalized research and development expense	31,690	41,720
Pension benefits	11,009	39,063
Deferred revenue	71,399	67,433
Stock-based compensation	16,777	18,828
Other reserves not currently deductible	21,940	24,273
Amortization of intangible assets	62,227	9,302
Other tax credits	37,270	30,982
Depreciation	3,465	3,157
Capital loss carryforward	8,040	7,964
Other	10,116	7,118
Gross deferred tax assets	361,428	316,539
Valuation allowance	(198,168)	(177,541)
Total deferred tax assets	163,260	138,998
Deferred tax liabilities:		
Acquired intangible assets not deductible	(124,401)	(110,003)
Pension prepayments	(395)	(20,263)
Deferred revenue	(3,110)	(1,446)
Other	(3,598)	(4,484)
Total deferred tax liabilities	(131,504)	(136,196)
Net deferred tax assets	\$ 31,756	\$ 2,802

We have concluded, based on the weight of available evidence, that a full valuation allowance continues to be required against our U.S. net deferred tax assets as they are not more likely than not to be realized in the future. We will continue to reassess whether a valuation allowance is required each financial reporting period.

For U.S. tax return purposes, net operating loss (NOL) carryforwards and tax credits are generally available to be carried forward to future years, subject to certain limitations. At September 30, 2015, we had U.S. federal NOL carryforwards of \$159.7 million that expire in 2018 to 2035. These include NOL carryforwards from acquisitions of \$81 million. The utilization of these NOL carryforwards is limited as a result of the change in ownership rules under Internal Revenue Code Section 382. NOL's totaling \$38.8 million relate to windfall tax benefits that have not been recognized, the impact of which will be recorded in APIC when realized.

As of September 30, 2015, we had Federal R&D credit carryforwards of \$18.5 million, which expire beginning in 2021 and ending in 2035, and Massachusetts R&D credit carryforwards of \$25.7 million, which expire beginning in 2016 and ending in 2030. We also had foreign tax credits of \$16.0 million, which expire beginning in 2023 and ending in 2025. A full valuation allowance is recorded against these carryforwards.

We also have NOL carryforwards in non-U.S. jurisdictions totaling \$117.7 million, the majority of which do not expire. We also have non-U.S. tax credit carryforwards of \$7.2 million that expire beginning in 2025 and ending in 2034. There are limitations imposed on the utilization of such NOLs that could restrict the recognition of any tax benefits.

As of September 30, 2015, we have a valuation allowance of \$166.5 million against net deferred tax assets in the U.S. and a remaining valuation allowance of \$31.7 million against net deferred tax assets in certain foreign jurisdictions. The valuation allowance recorded against net deferred tax assets of certain foreign jurisdictions is established primarily for our net operating loss carryforwards, the majority of which do not expire. There are limitations imposed on the utilization of such net operating losses that could restrict the recognition of any tax benefits.

The changes to the valuation allowance were primarily due to:

	Year ended September 30,		
	2015	2014	2013
	(in millions)		
Valuation allowance beginning of year	\$ 177.5	\$ 156.5	\$ 170.4
Net release of valuation allowance (1)	(18.7)	(18.1)	(44.6)
Net increase/decrease in deferred tax assets for foreign jurisdictions with a full valuation allowance	(1.9)	(5.2)	1.9
Establish valuation allowance for acquired businesses	—	21.5	12.1
Establish valuation allowance in foreign jurisdictions	—	3.5	—
Adjust deferred tax asset and valuation allowance	41.3	19.3	16.7
Valuation allowance end of year	<u>\$ 198.2</u>	<u>\$ 177.5</u>	<u>\$ 156.5</u>

- (1) In 2014 and 2013, this is attributable to recognition of deferred tax liabilities recorded in connection with accounting for acquisitions and in 2015 and 2013 a reduction in deferred tax assets associated with our U.S. pension plan, both of which are described above.

Our policy is to record estimated interest and penalties related to the underpayment of income taxes as a component of our income tax provision. In 2015 and 2014, we recorded interest expense of \$0.1 million and \$0.3 million, respectively. In 2013, we recorded a net benefit of \$1.2 million. In 2015, 2014 and 2013, we had no tax penalty expense in our income tax provision. As of September 30, 2015 and 2014, we had accrued \$1.5 million and \$1.4 million, respectively, of net estimated interest expense related to income tax accruals. We had \$0.1 million of accrued tax penalties as of September 30, 2013, and no accrued tax penalties as of September 30, 2015 or 2014.

Unrecognized tax benefits	Year ended September 30,		
	2015	2014	2013
	(in millions)		
Unrecognized tax benefit beginning of year	\$ 15.0	\$ 13.7	\$ 19.1
Tax positions related to current year:			
Additions	1.3	2.2	1.0
Tax positions related to prior years:			
Additions	0.8	0.3	1.8
Reductions	(3.0)	(0.1)	(6.3)
Settlements	—	(0.6)	(0.7)
Statute expirations	—	(0.5)	(1.2)
Unrecognized tax benefit end of year	<u>\$ 14.1</u>	<u>\$ 15.0</u>	<u>\$ 13.7</u>

If all of our unrecognized tax benefits as of September 30, 2015 were to become recognizable in the future, we would record a benefit to the income tax provision of \$12.5 million (which would be partially offset by an increase in the U.S. valuation allowance of \$4.5 million) and a credit to additional paid-in capital (APIC) of \$1.6 million. Although we believe our tax estimates are appropriate, the final determination of tax audits and any related litigation could result in favorable or unfavorable changes in our estimates. We anticipate the settlement of tax audits may be finalized within the next twelve months and could result in a decrease in our unrecognized tax benefits of up to \$4 million.

In the normal course of business, PTC and its subsidiaries are examined by various taxing authorities, including the IRS in the United States. As of September 30, 2015, we remained subject to examination in the following major tax jurisdictions for the tax years indicated:

<u>Major Tax Jurisdiction</u>	<u>Open Years</u>
United States	2011 through 2015
Germany	2011 through 2015
France	2013 through 2015
Japan	2009 through 2015
Ireland	2011 through 2015

We incurred expenses related to stock-based compensation in 2015, 2014 and 2013 of \$50.2 million, \$50.9 million and \$48.8 million, respectively. Accounting for the tax effects of stock-based awards requires that we establish a deferred tax asset as the compensation is recognized for financial reporting prior to recognizing the tax deductions. The tax benefit recognized in the Consolidated Statements of Operations related to stock-based compensation totaled \$0.7 million, \$0.7 million and \$2.7 million in 2015, 2014 and 2013, respectively. Upon the settlement of the stock-based awards (i.e., exercise, vesting, forfeiture or cancellation), the actual tax deduction is compared with the cumulative financial reporting compensation cost and any excess tax deduction is considered a windfall tax benefit and is tracked in a “windfall tax benefit pool” to offset any future tax deduction shortfalls and will be recorded as increases to APIC in the period when the tax deduction reduces income taxes payable. In 2015, 2014 and 2013, we recorded windfall tax benefits of \$0.0 million, \$10.4 million and \$0.3 million to APIC, respectively. We follow the with-and-without approach for the direct effects of windfall tax deductions to determine the timing of the recognition of benefits for windfall tax deductions. We follow the direct method for indirect effects. As of September 30, 2015, the tax effect of windfall tax deductions which had not yet reduced taxes payable was \$30.1 million.

We have not provided for U.S. income taxes or foreign withholding taxes on foreign unrepatriated earnings as it is our current intention to permanently reinvest these earnings outside the U.S. unless it can be done with no significant tax cost, with the exception of a newly formed foreign holding company. There was no impact to this assertion in the current year. In the future, we expect to incur annual deferred tax expense of \$11 million. If we decide to change this assertion in the future to repatriate any additional non-U.S. earnings, we may be required to establish a deferred tax liability on such earnings. The cumulative amount of undistributed earnings of our subsidiaries for which U.S. income taxes have not been provided totaled approximately \$1,915 million and \$613 million as of September 30, 2015 and 2014, respectively. The amount of unrecognized deferred tax liability on the undistributed earnings cannot be practicably determined at this time.

H. Debt

Credit Agreement

In September 2014, we entered into a multi-currency credit facility with a syndicate of sixteen banks for which JPMorgan Chase Bank, N.A. acted as Administrative Agent. We used the credit facility for general corporate purposes, including acquisitions of businesses, share repurchases and working capital requirements. As of September 30, 2015, the fair value of our credit facility approximated our book value. This credit facility was replaced by a new credit facility in November, 2015. Refer to Note O *Subsequent Event* for details.

The credit facility consisted of a \$500 million term loan and a \$1 billion revolving loan commitment. The revolving loan commitment did not require amortization of principal. The term loan required prepayment of principal at the end of each calendar quarter. The revolving loan and term loan could be repaid in whole or in part prior to the scheduled maturity dates at our option without penalty or premium. The credit facility was scheduled to mature on September 15, 2019, when all remaining amounts outstanding would have been due and payable in full. We would have been required to make principal payments under the term loan of \$50 million, \$50 million, \$75 million and \$300 million in 2016, 2017, 2018 and 2019, respectively.

PTC was the sole borrower under the credit facility. The obligations under the credit facility were guaranteed by PTC’s material domestic subsidiaries and 65% of the voting equity interests of PTC’s material first-tier foreign subsidiaries were pledged as collateral for the obligations.

As of September 30, 2015, we had \$668.1 million outstanding under the credit facility comprised of the \$475 million term loan and a \$193.1 million revolving loan. Loans under the credit facility bore interest at variable rates which reset every 30 to 180 days depending on the rate and period selected by PTC as described below. As of September 30, 2015, the annual rate on the term loan and \$43.1 million of the revolving loan was 1.875%. The annual rate on \$50.0 million of the revolving loan was 1.875%. The annual rate on the remaining \$100.0 million revolving loan was 1.75% on September 30, 2015 and was reset to 1.875% on October 6, 2015. Interest rates on borrowings outstanding under the credit facility ranged from 1.25% to 1.5% above an adjusted LIBO rate for Eurodollar-based borrowings or 0.25% to 0.5% above the defined base rate (the greater of the Prime Rate, the Federal Funds Effective Rate plus 0.005%, or an adjusted LIBO rate plus 1%) for base rate borrowings, in each case based upon PTC’s leverage ratio. Additionally, PTC could borrow certain foreign currencies at rates set in the same

range above the respective London interbank offered interest rates for those currencies, based on PTC's leverage ratio. A quarterly commitment fee on the undrawn portion of the credit facility was required, ranging from 0.175% to 0.25% per annum, based upon PTC's leverage ratio.

The credit facility limited PTC's and its subsidiaries' ability to, among other things: incur additional indebtedness; incur liens or guarantee obligations; pay dividends (other than to PTC) and make other distributions; make investments and enter into joint ventures; dispose of assets; and engage in transactions with affiliates, except on an arms-length basis. Under the credit facility, PTC and its material domestic subsidiaries could not invest cash or property in, or loan to, PTC's foreign subsidiaries in aggregate amounts exceeding \$75 million for any purpose and an additional \$150 million for acquisitions of businesses. In addition, under the credit facility, PTC was required to maintain the following financial ratios:

- a leverage ratio, defined as consolidated funded indebtedness to consolidated trailing four quarters EBITDA, of no greater than 3.00 to 1.00 at any time; and
- a fixed charge coverage ratio, defined as the ratio of consolidated trailing four quarters EBITDA less consolidated capital expenditures to consolidated fixed charges, of no less than 3.50 to 1.00 at any time.

As of September 30, 2015, our leverage ratio was 2.45 to 1.00, our fixed charge coverage ratio was 6.54 to 1.00 and we were in compliance with all financial and operating covenants of the credit facility.

Any failure to comply with the financial or operating covenants of the credit facility would prevent PTC from being able to borrow additional funds, and would constitute a default, permitting the lenders to, among other things, accelerate the amounts outstanding, including all accrued interest and unpaid fees, under the credit facility and to terminate the credit facility. A change in control of PTC, as defined in the agreement, also would have constituted an event of default, permitting the lenders to accelerate the indebtedness and terminate the credit facility.

We incurred \$7.9 million of origination costs in 2014 in connection with entering into the new credit facilities. These origination costs were recorded as deferred debt issuance costs when incurred and were being expensed over the remaining term of the credit facility.

In 2015, 2014 and 2013, we paid \$10.1 million, \$5.7 million and \$5.8 million, respectively, of interest on the credit facilities. The average interest rate on borrowings outstanding during 2015, 2014 and 2013 was approximately 1.7%, 1.6% and 1.7%, respectively.

I. Commitments and Contingencies

Leasing Arrangements

We lease office facilities under operating leases expiring at various dates through 2025. Certain leases require us to pay for taxes, insurance, maintenance and other operating expenses in addition to rent. Lease expense was \$36.9 million, \$38.6 million and \$38.4 million in 2015, 2014 and 2013, respectively. At September 30, 2015, our future minimum lease payments under noncancellable operating leases are as follows:

<u>Year ending September 30,</u>	<u>(in thousands)</u>
2016	\$ 35,829
2017	26,582
2018	21,705
2019	18,242
2020	15,033
Thereafter	26,698
Total minimum lease payments	<u>\$ 144,089</u>

Amounts above include future minimum lease payments for our corporate headquarters facility located in Needham, Massachusetts. The lease for our headquarters facility was renewed in the first quarter of 2011 for an additional 10 years (through November 2022) with a ten year renewal option through November 2032. Under the terms of the lease, we are paying approximately \$7.4 million in annual base rent plus operating expenses. The amended lease provides for \$12.8 million in landlord funding for leasehold improvements which we completed in 2014. We capitalized these leasehold improvements and will amortize them to expense over the shorter of the lease term or their expected useful life. The \$12.8 million of funding by the landlord is not included in the table above and reduces rent expense over the lease term.

As of September 30, 2015 and 2014, we had letters of credit and bank guarantees outstanding of \$4 million (of which \$1.1 million was collateralized) and \$3.6 million (of which \$0.9 million was collateralized), respectively, primarily related to our corporate headquarters lease.

Legal and Regulatory Matters

China Investigation

We have been in discussions with the U.S. Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) to resolve a previously announced investigation concerning expenditures by our business partners in China and by our China business, including for travel and entertainment, that apparently benefited employees of customers regarded as state owned enterprises in China. This matter involves issues regarding compliance with laws, including the U.S. Foreign Corrupt Practices Act.

In the third quarter of 2015, we recorded a liability of \$13.6 million and, as a result of an agreement in principle reached in mid-November to settle the matter with these agencies, we recorded an additional liability of \$14.6 million for a total accrual of \$28.2 million. There can be no assurance that we and these agencies will enter into final settlements on the foregoing terms or, if not, that the cost of any final settlements, if reached, would not exceed the existing accrual. Further, any settlement or other resolution of this matter could have collateral effects on our business in China, the United States and elsewhere.

Other Legal Proceedings

We are subject to various legal proceedings and claims that arise in the ordinary course of business. We do not believe that resolving the legal proceedings and claims that we are currently subject to will have a material adverse impact on our financial condition, results of operations or cash flows. However, the results of legal proceedings cannot be predicted with certainty. Should any of these legal proceedings and claims be resolved against us, the operating results for a particular reporting period could be adversely affected.

Accruals

With respect to legal proceedings and claims, we record an accrual for a contingency when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. For legal proceedings and claims for which the likelihood that a liability has been incurred is more than remote but less than probable, we estimate the range of possible outcomes. As of September 30, 2015, we had a legal proceedings and claims accrual of \$30.5 million, including an accrual of \$28.2 million for the China investigation.

Guarantees and Indemnification Obligations

We enter into standard indemnification agreements in the ordinary course of our business. Pursuant to such agreements with our business partners or customers, we indemnify, hold harmless, and agree to reimburse the indemnified party for losses suffered or incurred by the indemnified party, generally in connection with patent, copyright or other intellectual property infringement claims by any third party with respect to our products, as well as claims relating to property damage or personal injury resulting from the performance of services by us or our subcontractors. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited. Historically, our costs to defend lawsuits or settle claims relating to such indemnity agreements have been minimal and we accordingly believe the estimated fair value of liabilities under these agreements is immaterial.

We warrant that our software products will perform in all material respects in accordance with our standard published specifications in effect at the time of delivery of the licensed products for a specified period of time. Additionally, we generally warrant that our consulting services will be performed consistent with generally accepted industry standards. In most cases, liability for these warranties is capped. If necessary, we would provide for the estimated cost of product and service warranties based on specific warranty claims and claim history; however, we have not incurred significant cost under our product or services warranties. As a result, we believe the estimated fair value of these liabilities is immaterial.

J. Stockholders' Equity

Preferred Stock

We may issue up to 5.0 million shares of our preferred stock in one or more series. 0.5 million of these shares are designated as Series A Junior Participating Preferred Stock. Our Board of Directors is authorized to fix the rights and terms for any series of preferred stock without additional shareholder approval.

Common Stock

Our Articles of Organization authorize us to issue up to 500 million shares of our common stock. Our Board of Directors has periodically authorized the repurchase of shares of our common stock. We were authorized to repurchase up to \$100 million worth of shares with cash from operations for each of our fiscal years 2014 and 2013. Additionally, on August 4, 2014, our Board of Directors authorized us to repurchase up to an additional \$600 million of our common stock through September 30, 2017. We intend to use cash from operations and borrowings under our credit facility to make such repurchases. We repurchased 2.7 million shares at a cost of \$64.9 million in 2015, 5.1 million shares at a cost of \$224.9 million in 2014 (including \$37.5 million held by the bank pending final settlement of the accelerated share repurchase ("ASR") agreement described below) and 3.1 million shares at a cost of \$74.9 million in 2013. All shares of our common stock repurchased are automatically restored to the status of authorized and unissued. Future repurchases of shares will reduce our cash balances.

On August 14, 2014, we entered into an accelerated share repurchase ("ASR") agreement with a major financial institution ("Bank"). The ASR allowed us to buy a large number of shares immediately at a purchase price determined by an average market price over a period of time. Under the ASR, we agreed to purchase \$125.0 million of our common stock, in total, with an initial delivery to us in August 2014 of 2.3 million shares. We settled the ASR in December 2014 and the Bank delivered to us 1.1 million additional shares.

K. Equity Incentive Plan

Our 2000 Equity Incentive Plan (2000 Plan) provides for grants of nonqualified and incentive stock options, common stock, restricted stock, restricted stock units and stock appreciation rights to employees, directors, officers and consultants. We award restricted stock units as the principal equity incentive awards, including certain performance-based awards that are earned based on achieving performance criteria established by the Compensation Committee of our Board of Directors on or prior to the grant date. Each restricted stock unit represents the contingent right to receive one share of our common stock.

The fair value of restricted stock units granted in 2015, 2014 and 2013 was based on the fair market value of our stock on the date of grant. The weighted average fair value per share of restricted stock units granted in 2015, 2014 and 2013 was \$38.19, \$33.88 and \$22.87, respectively. Pre-vesting forfeiture rates for purposes of determining stock-based compensation for all periods presented were estimated by us to be 0% for directors and executive officers, 2% to 4% for vice president-level employees and 7% for all other employees.

The following table shows total stock-based compensation expense recorded from our stock-based awards as reflected in our Consolidated Statements of Operations:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Cost of license and subscription revenue	\$ 521	\$ 314	\$ 21
Cost of support revenue	3,775	3,745	3,324
Cost of professional services revenue	5,871	6,351	6,134
Sales and marketing	12,223	10,982	11,326
Research and development	11,623	10,119	8,590
General and administrative	16,169	19,378	19,392
Total stock-based compensation expense	\$ 50,182	\$ 50,889	\$ 48,787

As of September 30, 2015, total unrecognized compensation cost related to unvested restricted stock units expected to vest was approximately \$62.5 million and the weighted average remaining recognition period for unvested awards was 17 months.

As of September 30, 2015, 3.6 million shares of common stock were available for grant under the 2000 Plan and 3.7 million shares of common stock were reserved for issuance upon the exercise of stock options and vesting of restricted stock units granted and outstanding.

Restricted stock unit activity for the year ended September 30, 2015	Shares	Weighted Average Grant Date Fair Value	Aggregate Intrinsic Value as of September 30, 2015
	(in thousands except grant date fair value data)		
Balance of nonvested outstanding restricted stock units October 1, 2014	4,379	\$ 26.87	
Granted	1,910	\$ 38.19	
Vested	(2,206)	\$ 24.67	
Forfeited or not earned	(429)	\$ 30.94	
Balance of nonvested outstanding restricted stock units September 30, 2015	<u>3,654</u>	\$ 33.64	\$ 115,987

Restricted stock unit grants	Restricted Stock Units	
	Performance-based (1)	Time-based (2)
	(Number of Units in thousands)	
Year ended September 30, 2015	313	1,597

- (1) The performance-based RSUs were granted to employees, including our executive officers, pursuant to the terms described below.
- (2) The service-based RSUs were issued to employees, including our executive officers, and our directors. Of these RSUs, approximately 212,000 will vest one year from the date of grant. Substantially all other service-based RSUs will vest in three substantially equal annual installments on or about the anniversary of the date of grant.

In 2015, we granted the target performance-based restricted stock units ("target RSUs") shown in the table above to senior level employees, including our executive officers. These RSUs are eligible to vest based upon our total shareholder return relative to a peer group (the "TSR units"), measured annually over a three-year period. The number of TSR units to vest over the three years period will be determined based on the performance of PTC stock relative to the stock performance of an index of PTC peer companies established as of the grant date, as determined at the end of three measurement periods ending on September 30, 2015, 2016 and 2017, respectively. The shares earned for each period will vest on November 15 following each measurement period, up to a maximum of two times or one and one half times, as applicable, the number of target RSUs (up to a maximum of 590,000 shares). No vesting will occur in a period unless an annual threshold requirement is achieved. The employee must remain employed by PTC through the applicable vest date for any RSUs to vest. If the return to PTC shareholders is negative but still meets or exceeds the peer group indexed return, a maximum of 100% of the target RSUs shall vest for the measurement period. TSR units not earned in the first two year measurement periods are eligible to be earned in the third measurement period.

The weighted average fair value of the TSR units was \$41.32 per target RSU on the grant date. The fair value of the TSR units was determined using a Monte Carlo simulation model, a generally accepted statistical technique used to simulate a range of possible future stock prices for PTC and the peer group. The method uses a risk-neutral framework to model future stock price movements based upon the risk-free rate of return, the volatility of each entity, and the pairwise correlations of each entity being modeled. The fair value for each simulation is the product of the payout percentage determined by PTC's TSR rank against the peer group, the projected price of PTC stock, and a discount factor based on the risk-free rate.

The significant assumptions used in the Monte Carlo simulation model were as follows:

Average volatility of peer group	29.8%
Risk free interest rate	0.85%
Dividend yield	—%

Until July 2005, we generally granted stock options. For those options, the option exercise price was typically the fair market value at the date of grant, and they generally vested over four years and expired ten years from the date of grant. There were 3,000 options outstanding and exercisable at September 30, 2015.

	Year ended September 30,		
	2015	2014	2013
Value of stock option and stock-based award activity	(in thousands)		
Total intrinsic value of stock options exercised	\$ 182	\$ 2,040	\$ 6,525
Total fair value of restricted stock unit awards vested	\$ 84,189	\$ 79,660	\$ 48,083

In 2015, shares issued upon vesting of restricted stock units were net of 0.8 million shares retained by us to cover employee tax withholdings of \$29.2 million. In 2014, shares issued upon vesting of restricted stock units were net of 0.8 million shares retained by us to cover employee tax withholdings of \$26.9 million. In 2013, shares issued upon vesting of restricted stock and restricted stock units were net of 0.7 million shares retained by us to cover employee tax withholdings of \$15.0 million.

L. Employee Benefit Plan

We offer a savings plan to eligible U.S. employees. The plan is intended to qualify under Section 401(k) of the Internal Revenue Code. Participating employees may defer a portion of their pre-tax compensation, as defined, but not more than statutory limits. We contribute 50% of the amount contributed by the employee, up to a maximum of 6% of the employee's earnings. Our matching contributions vest at a rate of 25% per year of service, with full vesting after 4 years of service. We made matching contributions of \$5.3 million, \$5.1 million, and \$5.0 million in 2015, 2014 and 2013, respectively.

M. Pension Plans

We maintain several international defined benefit pension plans primarily covering certain employees of Computervision, which we acquired in 1998, CoCreate, which we acquired in 2008 and covering employees in Japan. Benefits are based upon length of service and average compensation with vesting after one to five years of service. The pension cost was actuarially computed using assumptions applicable to each subsidiary plan and economic environment. We adjust our pension liability related to our plans due to changes in actuarial assumptions and performance of plan investments, as shown below. Effective in 1998, benefits under one of the international plans were frozen indefinitely.

We maintained a U.S. defined benefit pension plan (the Plan) that covered certain persons who were employees of Computervision Corporation (acquired by us in 1998). Benefits under the Plan were frozen in 1990. In the second quarter of 2014, we began the process of terminating the Plan, which included settling Plan liabilities by offering lump sum distributions to plan participants and purchasing annuity contracts to cover vested benefits. We completed the termination in the fourth quarter of 2015. In connection with the termination, we contributed \$25.5 million to the Plan and recorded a settlement loss of \$66.3 million.

The following table presents the actuarial assumptions used in accounting for the pension plans:

	U.S. Plan			International Plans		
	2015	2014	2013	2015	2014	2013
Weighted average assumptions used to determine benefit obligations at September 30 measurement date:						
Discount rate	—%	3.80%	4.90%	2.2%	2.4%	3.3%
Rate of increase in future compensation (1)	—%	—%	—%	3.0%	3.0%	3.0%
Weighted average assumptions used to determine net periodic pension cost for fiscal years ended September 30:						
Discount rate	3.80%	4.90%	4.00%	2.4%	3.3%	3.4%
Rate of increase in future compensation	—%	—%	—%	3.0%	3.0%	3.0%
Rate of return on plan assets	1.35%	7.25%	7.25%	5.8%	5.7%	5.4%

(1) The rate of increase in future compensation is weighted for all plans, ongoing and frozen (with a 0% increase for frozen plans). The weighted rate of increase for ongoing non-U.S. plans was 3% at September 30, 2015 and 2014.

In selecting the expected long-term rate of return on assets, we considered the current investment portfolio and the investment return goals in the plans' investment policy statements. We, with input from the plans' professional investment managers and actuaries, also considered the average rate of earnings expected on the funds invested or to be invested to provide plan benefits. This process included determining expected returns for the various asset classes that comprise the plans' target

asset allocation. This basis for selecting the long-term asset return assumptions is consistent with the prior year. Using generally accepted diversification techniques, the plans' assets, in aggregate and at the individual portfolio level, are invested so that the total portfolio risk exposure and risk-adjusted returns best meet the plans' long-term liabilities to employees. Plan asset allocations are reviewed periodically and rebalanced to achieve target allocation among the asset categories when necessary.

As of September 30, 2015, for the international plans, the weighted long-term rate of return assumption is 5.73%. These rates of return, together with the assumptions used to determine the benefit obligations as of September 30, 2015 in the table above, will be used to determine our 2016 net periodic pension cost, which we expect to be approximately \$2 million.

The actuarially computed components of net periodic pension cost recognized in our Consolidated Statements of Operations for each year are shown below:

	U.S. Plan			International Plans		
	2015	2014	2013	2015	2014	2013
	(in thousands)					
Interest cost of projected benefit obligation	\$ 4,591	\$ 5,461	\$ 4,989	\$ 1,828	\$ 2,442	\$ 2,384
Service cost	—	—	—	1,466	1,659	2,017
Expected return on plan assets	(1,364)	(7,151)	(6,128)	(3,364)	(2,506)	(2,126)
Amortization of prior service cost	—	—	—	(4)	(5)	(6)
Recognized actuarial loss	2,577	2,213	3,152	1,815	1,181	1,248
Settlement loss	66,332	—	—	—	—	—
Net periodic pension cost	<u>\$ 72,136</u>	<u>\$ 523</u>	<u>\$ 2,013</u>	<u>\$ 1,740</u>	<u>\$ 2,771</u>	<u>\$ 3,517</u>

The following tables display the change in benefit obligation and the change in the plan assets and funded status of the plans as well as the amounts recognized in our Consolidated Balance Sheets:

	U.S. Plan		International Plans		Total	
	Year ended September 30,					
	2015	2014	2015	2014	2015	2014
(in thousands)						
Change in benefit obligation:						
Projected benefit obligation—beginning of year	\$ 134,453	\$ 113,378	\$ 84,106	\$ 74,956	\$ 218,559	\$ 188,334
Service cost	—	—	1,466	1,659	1,466	1,659
Interest cost	4,591	5,461	1,828	2,442	6,419	7,903
Actuarial loss	1,606	20,563	1,988	12,732	3,594	33,295
Foreign exchange impact	—	—	(9,515)	(6,480)	(9,515)	(6,480)
Participant contributions	—	—	198	325	198	325
Benefits paid	(5,300)	(4,949)	(1,883)	(1,528)	(7,183)	(6,477)
Settlements	(135,350)	—	—	—	(135,350)	—
Projected benefit obligation—end of year	\$ —	\$ 134,453	\$ 78,188	\$ 84,106	\$ 78,188	\$ 218,559
Change in plan assets and funded status:						
Plan assets at fair value—beginning of year	\$ 112,859	\$ 94,831	\$ 44,491	\$ 43,362	\$ 157,350	\$ 138,193
Actual return on plan assets	2,316	12,425	(438)	3,489	1,878	15,914
Employer contributions	25,475	10,552	21,225	2,353	46,700	12,905
Participant contributions	—	—	198	325	198	325
Foreign exchange impact	—	—	(5,632)	(3,510)	(5,632)	(3,510)
Settlements	(135,350)	—	—	—	(135,350)	—
Benefits paid	(5,300)	(4,949)	(1,883)	(1,528)	(7,183)	(6,477)
Plan assets at fair value—end of year	—	112,859	57,961	44,491	57,961	157,350
Projected benefit obligation—end of year	—	134,453	78,188	84,106	78,188	218,559
Underfunded status	\$ —	\$ (21,594)	\$ (20,227)	\$ (39,615)	\$ (20,227)	\$ (61,209)
Accumulated benefit obligation—end of year	\$ —	\$ 134,453	\$ 74,928	\$ 80,364	\$ 74,928	\$ 214,817
Amounts recognized in the balance sheet:						
Non-current liability	\$ —	\$ —	\$ (20,227)	\$ (39,615)	\$ (20,227)	\$ (39,615)
Current liability	\$ —	\$ (21,594)	\$ —	\$ —	\$ —	\$ (21,594)
Amounts in accumulated other comprehensive loss:						
Unrecognized actuarial loss	\$ —	\$ 68,256	\$ 28,339	\$ 27,669	\$ 28,339	\$ 95,925

We expect to recognize approximately \$2 million of the unrecognized actuarial loss as of September 30, 2015 as a component of net periodic pension cost in 2016.

The following table shows change in accumulated other comprehensive loss:

	U.S. Plan		International Plans		Total	
	Year ended September 30,					
	2015	2014	2015	2014	2015	2014
	(in thousands)					
Accumulated other comprehensive loss- beginning of year	\$ 68,256	\$ 55,180	\$ 27,669	\$ 19,177	\$ 95,925	\$ 74,357
Recognized during year - net actuarial (losses)	(2,577)	(2,213)	(1,811)	(1,176)	(4,388)	(3,389)
Occurring during year - settlement loss	(66,332)	—	—	—	(66,332)	—
Occurring during year - net actuarial losses	653	15,289	5,792	11,749	6,445	27,038
Foreign exchange impact	—	—	(3,311)	(2,081)	(3,311)	(2,081)
Accumulated other comprehensive loss- end of year	\$ —	\$ 68,256	\$ 28,339	\$ 27,669	\$ 28,339	\$ 95,925

The following table shows the percentage of total plan assets for each major category of plan assets:

Asset category:	U.S. Plan		International Plans	
	September 30,			
	2015	2014	2015	2014
Equity securities	—%	—%	53%	51%
Fixed income securities	—%	100%	32%	28%
Insurance company	—%	—%	13%	19%
Cash	—%	—%	2%	2%
	—%	100%	100%	100%

We periodically review the pension plans' investments in the various asset classes. The current asset allocation target is 60% equity securities and 40% fixed income securities for the CoCreate plan in Germany, and 100% fixed income securities for the other international plans. The fixed income securities for the other international plans primarily include investments held with insurance companies with fixed returns. The plans' investment managers are provided specific guidelines under which they are to invest the assets assigned to them. In general, investment managers are expected to remain fully invested in their asset class with further limitations on risk as related to investments in a single security, portfolio turnover and credit quality.

The German CoCreate plan's investment policy prohibits the use of derivatives associated with leverage and speculation or investments in securities issued by PTC, except through index-related strategies and/or commingled funds. An investment committee oversees management of the pension plans' assets. Plan assets consist primarily of investments in mutual funds invested in equity and fixed income securities.

In 2015, 2014 and 2013 our actual return on plan assets was \$1.9 million, \$15.9 million and \$13.6 million, respectively.

Based on actuarial valuations and additional voluntary contributions, we contributed \$46.7 million, \$12.9 million, and \$10.0 million in 2015, 2014 and 2013, respectively, to the plans. We expect to make contributions totaling approximately \$0.8 million in 2016 for voluntary contributions to a non-U.S. plan.

As of September 30, 2015, benefit payments expected to be paid over the next ten years are outlined in the following table:

Year ending September 30,	U.S. Plan		International Plans		Total
	(in thousands)				
2016	\$	—	\$	1,714	\$ 1,714
2017		—		1,810	1,810
2018		—		2,204	2,204
2019		—		2,624	2,624
2020		—		2,906	2,906
2021 to 2025		—		19,827	19,827

Fair Value of Plan Assets

The International Plan assets are comprised primarily of investments in a trust and an insurance company. The underlying investments in the trust are primarily publicly traded European DJ EuroStoxx50 equities and European governmental fixed income securities. They are classified as Level 1 because the underlying units of the trust are traded in open public markets. The fair value of the underlying investments in equity securities and fixed income are based upon publicly-traded exchange prices.

	September 30, 2015			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
International plan assets:				
Fixed income securities:				
Government	\$ 11,086	\$ —	\$ —	\$ 11,086
Europe corporate investment grade	7,487	—	—	7,487
Europe large capitalization stocks	30,887	—	—	30,887
Insurance company funds (1)	—	7,668	—	7,668
Cash	833	—	—	833
	<u>\$ 50,293</u>	<u>\$ 7,668</u>	<u>\$ —</u>	<u>\$ 57,961</u>

(1) These investments are comprised primarily of funds invested with an insurance company in Japan with a guaranteed rate of return. The insurance company invests these assets primarily in government and corporate bonds.

N. Segment Information

We operate within a single industry segment—computer software and related services. Operating segments as defined under GAAP are components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. Our chief operating decision maker is our President and Chief Executive Officer. We have two operating and reportable segments: (1) Software Products, which includes license and related support revenue (including updates and technical support) for all our products except training-related products; and (2) Services, which includes consulting, implementation, training, cloud services, computer-based training products, including support on these products, and other services revenue. We do not allocate sales and marketing or administrative expenses to our operating segments as these activities are managed on a consolidated basis.

The revenue and operating income attributable to these operating segments are summarized as follows:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Software Products segment revenue	\$ 973,312	\$ 1,032,230	\$ 977,523
Services segment revenue	281,930	324,737	316,018
Total revenue	<u>\$ 1,255,242</u>	<u>\$ 1,356,967</u>	<u>\$ 1,293,541</u>
Operating income: (1) (2)			
Software Products segment	\$ 591,845	\$ 663,593	\$ 605,963
Services segment	43,029	48,378	37,131
Sales and marketing expenses	(355,070)	(371,392)	(378,771)
General and administrative expenses	(238,188)	(144,003)	(136,999)
Total operating income	<u>\$ 41,616</u>	<u>\$ 196,576</u>	<u>\$ 127,324</u>
Other expense, net	(15,091)	(10,464)	(1,090)
Income before income taxes	<u>\$ 26,525</u>	<u>\$ 186,112</u>	<u>\$ 126,234</u>

- (1) We recorded restructuring charges of \$43.4 million in 2015. Software Products included \$11.6 million; Services included \$10.4 million; sales and marketing expenses included \$16.3 million; and general and administrative expenses included \$5.1 million of the restructuring charges recorded in 2015. We recorded restructuring charges of \$28.4 million in 2014. Software Products included \$2.8 million; Services included \$9.8 million; sales and marketing expenses included \$13.9 million; and general and administrative expenses included \$1.8 million of the total restructuring charges recorded in 2014. We recorded restructuring charges of \$52.2 million in 2013. Software Products included \$17.7 million; Services included \$11.3 million; sales and marketing expenses included \$18.1 million; and general and administrative expenses included \$5.1 million of the total restructuring charges recorded in 2013.
- (2) The Software Products segment operating income includes depreciation and amortization of \$60.7 million, \$55.0 million, and \$52.6 million in 2015, 2014, and 2013, respectively. The Services segment operating income includes depreciation and amortization of \$8.1 million, \$7.4 million, and \$6.1 million in 2015, 2014, and 2013, respectively.

We report revenue by the following four product areas:

- CAD: PTC Creo[®] and PTC Mathcad[®].
- ePLM: PLM solutions (primarily PTC Windchill[®]) and ALM solutions (primarily PTC Integrity[™]) and Atego[®].
- SLM: PTC Arbortext[®] and PTC Servigistics[®].
- IoT: ThingWorx[®], Axeda[®] and ThingWorx Machine Learning[™] products.

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
CAD	\$ 511,582	\$ 581,508	\$ 552,442
ePLM	524,741	599,312	571,058
SLM	166,060	170,980	170,041
IoT	52,859	5,167	—
Total revenue	<u>\$ 1,255,242</u>	<u>\$ 1,356,967</u>	<u>\$ 1,293,541</u>

Data for the geographic regions in which we operate is presented below.

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Revenue:			
Americas (1)	\$ 530,311	\$ 558,671	\$ 522,788
Europe (2)	467,805	528,090	479,877
Pacific Rim	139,165	148,151	161,587
Japan	117,961	122,055	129,289
Total revenue	<u>\$ 1,255,242</u>	<u>\$ 1,356,967</u>	<u>\$ 1,293,541</u>

	September 30,		
	2015	2014	2013
	(in thousands)		
Long-lived tangible assets:			
Americas (3)	\$ 47,509	\$ 51,027	\$ 49,788
Europe	7,424	7,020	5,557
Asia-Pacific	10,229	9,736	9,307
Total long-lived tangible assets	<u>\$ 65,162</u>	<u>\$ 67,783</u>	<u>\$ 64,652</u>

- (1) Includes revenue in the United States totaling \$500.6 million, \$518.7 million and \$485.2 million for 2015, 2014 and 2013, respectively.
- (2) Includes revenue in Germany totaling \$177.1 million, \$200.3 million and \$167.2 million for 2015, 2014 and 2013, respectively.
- (3) Substantially all of the Americas long-lived tangible assets are located in the United States.

Our international revenue is presented based on the location of our customer. We license products to customers worldwide. Our sales and marketing operations outside the United States are conducted principally through our international sales subsidiaries throughout Europe and the Asia-Pacific regions. Intercompany sales and transfers between geographic areas are accounted for at prices that are designed to be representative of unaffiliated party transactions.

O. Subsequent Events

Restricted Stock Unit Grants

In November 2015, we granted the restricted stock units shown in the table below to employees, including some of our executive officers. The performance-based RSUs are granted to the executive officers only and are eligible to vest based upon our total shareholder return relative to a peer group target (the “TSR units”), measured annually over a three-year period that commenced on October 1, 2015. To the extent earned, these TSR units will vest in three substantially equal installments on the later of November 15, 2016, November 15, 2017 and November 15, 2018, or the date the Compensation Committee determines the extent to which the applicable performance criteria have been achieved for each performance period. RSUs not earned for a period may be earned in the third period. The number of TSR units that will vest will be based on the level of achievement up to a maximum of 570 thousand, with no vesting if the annual threshold requirement is not achieved, or the employee is no longer with the Company at the end of the relevant performance period.

The time-based RSUs were issued to both employees and our executive officers. In addition, executive officers have opportunity to earn up to one or, for our CEO, two times the number of time-based RSUs (up to a maximum of 302 thousand shares) if certain performance conditions are met. The time-based RSUs will vest in three substantially equal annual installments on November 15, 2016, 2017 and 2018. The performance-based RSUs will vest in three substantially equal installments on the later of November 15, 2016, November 15, 2017 and November 15, 2018, or the date the Compensation Committee determines the extent to which the applicable performance criteria have been achieved.

	TSR units	Performance-Based RSUs (in thousands)	Time-Based RSUs
Maximum number of RSUs eligible to vest	570	302	839
Intrinsic value on grant date based on the maximum number of RSUs eligible to vest	\$ 13,382	\$ 10,928	\$ 30,326

Performance-Based Stock Modification

In November 2015, the Compensation of Committee of our Board of Directors modified certain performance-based RSUs previously granted under our long-term incentive programs due to the impact of changes in our business model and foreign currency on our financial results. As a result, we expect to record approximately of \$10 million of stock-based compensation expense in the first quarter of 2016 for RSUs that were not expected to vest under the original grant terms.

Credit Facility

Subsequent to year end, we borrowed \$50 million under our credit facility in anticipation of our acquisition of Vuforia described below.

On November 4, 2015, we entered into a credit agreement with a syndicate of sixteen banks. This credit facility amended and restated our credit facility described in Note H in its entirety. We expect to use the credit facility for general corporate purposes, including acquisitions of businesses, share repurchases and working capital requirements. The credit facility consists of \$1 billion revolving loan commitment which may be increased by an additional \$500 million (in the form of revolving loans or term loans, or a combination thereof) if the existing or additional lenders are willing to make such increased commitments. We borrowed \$475 million under the credit agreement to repay an existing term loan under our previous credit facility described in Note H. The revolving loan commitment does not require amortization of principal and may be repaid in whole or in part prior to the scheduled maturity date at PTC's option without penalty or premium. The credit facility matures on September 15, 2019, when all remaining amounts outstanding will be due and payable in full. PTC and certain eligible foreign subsidiaries are eligible borrowers under this credit facility. Under the restated credit facility, we must maintain

- a total leverage ratio, defined as consolidated total indebtedness to the consolidated trailing four quarters EBITDA, not to exceed
 - prior to a Covenant Modification Trigger Event (incurring unsecured indebtedness of not less than \$200 million in aggregate) (x) 3.50 to 1.00 as of the last day of any fiscal quarter ending on or prior to July 2, 2016, and (y) 3.25 to 1.00 as of the last day of any fiscal quarter ending on or after September 30, 2016
 - on and after a Covenant Modification Trigger Event, 4.00 to 1.00 as of the last day of any fiscal quarter.
- a senior secured leverage ratio, defined as consolidated total indebtedness to consolidated trailing four quarters EBITDA, not to exceed 3.00 to 1.00 as of the last day of any fiscal quarter ending after a Covenant Modification Trigger Event, and
- a fixed charge coverage ratio, defined as the ratio of consolidated trailing four quarters EBITDA less consolidated capital expenditures to consolidated fixed charges, of not less than 3.50 to 1.00 as of the last day of any fiscal quarter.

The obligations under the credit facility are guaranteed by PTC and certain of its material domestic subsidiaries. In addition, PTC and certain of its material domestic subsidiaries' owned property (including equity interests) is subject to first priority perfected liens in favor of the lenders of this credit facility. 100% of the voting equity interests of certain of PTC's domestic subsidiaries and 65% of its material first-tier foreign subsidiaries are pledged as collateral for the obligations under the credit facility.

Other terms of the credit facility including interest rates, commitment fees, and restrictions are substantially the same as the previous credit facility.

Acquisition

On November 3, 2015, pursuant to an Asset Purchase Agreement, PTC acquired Vuforia business from Qualcomm Connected Experiences, Inc., a subsidiary of Qualcomm Incorporated, for approximately \$65 million in cash.

We acquired Vuforia and its augmented reality technology platform to enrich PTC's technology portfolio. At the time of the acquisition, Vuforia had approximately 80 employees and historical annualized revenues were not material. We have not yet completed our acquisition accounting.

Restructuring

On October 23, 2015, we committed to a plan to restructure our workforce and consolidate select facilities in order to reduce our cost structure and to realign our investments with our highest growth opportunities. The restructuring is expected to result in a charge of approximately \$40 million to \$50 million, which is primarily attributable to termination benefits, substantially all of which will be recorded in our first fiscal quarter ending January 2, 2016. The restructuring will result in cash expenditures of approximately \$40 million to \$50 million, which we expect will primarily be paid over the first three quarters of fiscal 2016. We expect that the effect of the expense reductions, offset by certain planned cost increases and investments in our business, will result in a decrease in costs and expenses of approximately \$17 million in 2016, as compared to 2015.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the following selected consolidated financial data in conjunction with Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing elsewhere in this Annual Report.

The Consolidated Statements of Operations data for the years ended September 30, 2015, 2014, and 2013 and the Consolidated Balance Sheets data as of September 30, 2015 and 2014 are derived from our audited consolidated financial statements appearing elsewhere in this Annual Report. The Consolidated Statements of Operations data for the years ended September 30, 2012 and 2011 and the Consolidated Balance Sheet data as of September 30, 2013, 2012 and 2011 are derived from our audited consolidated financial statements that are not included in this Annual Report. The historical results are not necessarily indicative of results in any future period.

FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA (1) (in thousands, except per share data)

	2015	2014	2013	2012	2011
Revenue	\$ 1,255,242	\$ 1,356,967	\$ 1,293,541	\$ 1,255,679	\$ 1,166,949
Gross margin	920,508	983,284	920,502	883,551	810,181
Operating income (2)	41,616	196,576	127,324	128,096	117,114
Net income (loss) (2) (3)	47,557	160,194	143,769	(35,398)	85,424
Earnings (loss) per share—Basic (2) (3)	0.41	1.36	1.20	(0.30)	0.73
Earnings (loss) per share—Diluted (2) (3)	0.41	1.34	1.19	(0.30)	0.71
Total assets	2,209,913	2,199,954	1,828,906	1,791,634	1,629,682
Working capital (4)	87,419	105,500	151,603	397,408	126,940
Long-term liabilities	732,482	719,398	373,813	512,631	341,668
Stockholders’ equity	860,171	853,889	926,480	797,259	822,690

QUARTERLY FINANCIAL INFORMATION (UNAUDITED) (in thousands, except per share data)

	September 30, 2015	July 4, 2015	April 4, 2015	January 3, 2015
Revenue	\$ 312,568	\$ 303,113	\$ 314,119	\$ 325,442
Gross margin	236,206	223,737	228,065	232,500
Operating (loss) income (2)	(21,610)	21,607	3,988	37,631
Net (loss) income (2) (3)	(5,553)	17,435	5,392	30,284
Earnings (loss) per share (2) (3):				
Basic	\$ (0.05)	\$ 0.15	\$ 0.05	\$ 0.26
Diluted	\$ (0.05)	\$ 0.15	\$ 0.05	\$ 0.26
Common Stock prices: (5)				
High	\$ 41.48	\$ 42.75	\$ 37.06	\$ 39.38
Low	\$ 30.97	\$ 36.09	\$ 31.15	\$ 33.61

	September 30, 2014	June 28, 2014	March 29, 2014	December 28, 2013
Revenue	\$ 366,708	\$ 336,634	\$ 328,700	\$ 324,925
Gross margin	270,854	245,558	234,903	231,969
Operating income (2)	36,108	54,384	51,213	54,871
Net income (2) (3)	38,755	38,026	43,756	39,657
Earnings per share (2) (3):				
Basic	\$ 0.33	\$ 0.32	\$ 0.37	\$ 0.33
Diluted	\$ 0.33	\$ 0.32	\$ 0.36	\$ 0.33
Common Stock prices: (5)				
High	\$ 40.06	\$ 38.95	\$ 40.40	\$ 34.40
Low	\$ 35.49	\$ 32.79	\$ 33.46	\$ 27.18

- (1) The consolidated financial position and results of operations data reflect our acquisitions of ColdLight on May 7, 2015 for \$98.6 million in cash, Axeda on August 11, 2014 for \$165.9 million in cash, ThingWorx on December 30, 2013 for \$111.5 million in cash, Servigistics on October 2, 2012 for \$220.8 million in cash and MKS on May 31, 2011 for \$265.2 million in cash, as well as certain other less significant businesses during these periods. Results of operations for the acquired businesses have been included in the Consolidated Statements of Operations since their acquisition dates.
- (2) Operating income and net income in 2015 includes a pre-tax U.S pension settlement loss of \$66.3 million recorded in the fourth quarter, a \$28.2 million charge related to a legal accrual and pre-tax restructuring charges of \$43.4 million (\$0.8 million in the fourth quarter, \$4.4 million in the third quarter, \$38.5 million in the second quarter and (\$0.3) million in the first quarter). Operating income and net income in 2014 includes pre-tax restructuring charges of \$28.4 million (\$26.8 million in the fourth quarter, \$0.5 million in the third quarter and \$1.1 million in the first quarter). Operating income and net income in 2013 includes pre-tax restructuring charges of \$52.2 million (\$17.9 million in the fourth quarter, \$3.1 million in the third quarter, \$15.8 million in the second quarter and \$15.4 million in the first quarter). Operating income and net income (loss) in 2012 includes pre-tax restructuring charges of \$24.9 million.
- (3) In 2015, net income includes an \$18.7 million tax benefit related to settlement of our U.S pension plan recorded in the fourth quarter. Net income in 2014 and 2013 includes tax benefits totaling \$18.1 million (\$9.1 million in the fourth quarter and \$8.9 million in the second quarter) and \$44.6 million (\$12.0 million in the fourth quarter and \$32.6 million in the first quarter), respectively, related to the reversal of a portion of the valuation allowance in the U.S. related to the impact on deferred taxes in accounting for acquisitions and accounting for the U.S. pension plan. The net loss in 2012 includes a net tax charge of \$124.5 million recorded in the fourth quarter ended September 30, 2012 to establish a valuation allowance against our U.S. net deferred tax assets.
- (4) Working capital in 2012 includes funds borrowed under our credit facility to fund our acquisition of Servigistics, (approximately \$220 million) which closed on October 2, 2012.
- (5) The common stock prices are based on the Nasdaq Global Select Market daily high and low sale prices. Our common stock is traded on the Nasdaq Global Select Market under the symbol "PTC".

DIRECTORS

Robert Schechter
Chairman of the Board
Chairman and Chief Executive Officer (Retired), NMS
Communications Corporation, a software company

Janice Chaffin
Group President, Consumer Business Unit (Retired),
Symantec Corporation, an enterprise software company

Donald Grierson
Chief Executive Officer (Retired), ABB Vetco International,
an oil services business

James Heppelmann
President and Chief Executive Officer, PTC

Klaus Hoehn
Vice President, Advanced Technology and Engineering,
Deere & Company, a manufacturing company

Paul Lacy
President (Retired), Kronos Incorporated, an enterprise
software company

Renato Zambonini
President and Chief Executive Officer (Retired), Cognos
Incorporated, an enterprise software company

CORPORATE OFFICERS

James Heppelmann
President and Chief Executive Officer

Andrew Miller
Executive Vice President, Chief Financial Officer

Barry Cohen
Executive Vice President, Strategy

Matthew Cohen
Executive Vice President, Global Services & Partners

Anthony DiBona
Executive Vice President, Global Maintenance

Robert Gremley
Group President, Technology Platforms

Craig Hayman
Group President, Solutions

Aaron von Staats
Corporate Vice President, General Counsel and Secretary

SHAREHOLDERS AND STOCK LISTING

Our common stock is traded on the Nasdaq Global Select
Market under the symbol PTC. On September 30, 2015, our
common stock was held by 1,355 stockholders of record.

DIVIDENDS

We have not paid dividends on our common stock and have
historically retained earnings for use in our business. We
review our policy with respect to the payment of dividends
from time to time. However, there can be no assurance that
we will pay any dividends in the future.

INVESTOR INFORMATION

You may obtain a copy of any of the exhibits to our Annual
Report on Form 10-K free of charge. These documents are
available on our website at www.ptc.com or by contacting
PTC Investor Relations.

Requests for information about PTC should be directed to:
Investor Relations
PTC
140 Kendrick Street
Needham, MA 02494-2714
Telephone: 781.370.5000
Email: ir@ptc.com

ANNUAL MEETING

The annual meeting of stockholders will be held at the time
and location stated below.

Wednesday, March 2, 2016
8:00 a.m., local time

PTC Headquarters
140 Kendrick Street
Needham, Massachusetts 02494

INTERNET ACCESS

www.ptc.com

GENERAL OUTSIDE COUNSEL

Locke Lord LLP, Boston, Massachusetts

INDEPENDENT ACCOUNTANTS

PricewaterhouseCoopers LLP, Boston, Massachusetts

TRANSFER AGENT AND REGISTRAR

American Stock Transfer & Trust Company, New York, NY

PTC®

PTC Worldwide Headquarters
140 Kendrick Street
Needham, MA 02494

+1 781.370.5000

PTC.com