

AMERICAN SOFTWARE INC

Form 10-K

July 13, 2018

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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended April 30, 2018

OR

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

For the transition period from _____ to _____

Commission File Number 0-12456

AMERICAN SOFTWARE, INC.

(Exact name of registrant as specified in its charter)

Georgia (State or other jurisdiction of incorporation or organization) 470 East Paces Ferry Road, N.E.	58-1098795 (IRS Employer Identification No.)
Atlanta, Georgia (Address of principal executive offices) (404) 261-4381	30305 (Zip Code)

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
None	None

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

Class A Common Shares, \$0.10 Par Value

(Title of class)

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate 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.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

At October 31, 2017, the last business day of the registrant's most recently completed second fiscal quarter, 27,896,254 Class A Common Shares and 2,256,588 Class B Common Shares of the registrant were outstanding. The aggregate market value (based upon the closing price of Class A Common Shares as quoted on the NASDAQ National Market System at October 31, 2017) of the Class A Common Shares held by non-affiliates on that date was approximately \$373.8 million. At July 6, 2018, 29,020,336 Class A Common Shares and 1,885,995 Class B Common Shares of the registrant were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE; LOCATION IN FORM 10-K

Portions of the Company's Proxy Statement for its 2018 Annual Meeting of Stockholders are incorporated by reference into Part III.

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American Software Inc.

ANNUAL REPORT ON FORM 10-K

For the Fiscal Year Ended April 30, 2018

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PART I

ITEM 1. BUSINESS

Special Cautionary Notice Regarding Forward-Looking Statements

We believe that it is important to communicate our future expectations to our shareholders and to the public. This report contains forward-looking statements, including, in particular, statements about our goals, plans, objectives, beliefs, expectations and prospects, under the headings Item 1. Business and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in this report. You can identify these statements by forward-looking words such as anticipate, intend, plan, continue, could, grow, may, potential, predict, strive, will, seek, estimate, believe, expect, and similar expressions that convey uncertainty of future events or outcomes. Any forward-looking statements herein are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include statements concerning future:

results of operations;

liquidity, cash flow and capital expenditures;

demand for and pricing of our products and services;

viability and effectiveness of strategic alliances;

industry conditions and market conditions;

acquisition activities and the effect of completed acquisitions; and

general economic conditions.

Although we believe that the goals, plans, expectations, and prospects reflected by our forward-looking statements are reasonable in view of the information currently available to us, those statements are not guarantees of performance. There are many factors that could cause our actual results to differ materially from those anticipated by forward-looking statements made herein. These factors include, but are not limited to, continuing U.S. and global economic uncertainty, the timing and degree of business recovery, unpredictability and the irregular pattern of future revenues, dependence on particular market segments or customers, competitive pressures, delays, product liability and warranty claims and other risks associated with new product development, undetected software errors, market acceptance of our products, technological complexity, the challenges and risks associated with integration of acquired product lines, companies and services, as well as a number of other risk factors that could affect our future performance. Factors that could cause or contribute to such differences include, but are not limited to, those we discuss under the section captioned Risk Factors in Item 1A. of this Form 10-K as well as the cautionary

statements and other factors that we discuss in other sections of this Form 10-K.

Company Overview

American Software, Inc. (*American Software* or the *Company*) was incorporated as a Georgia corporation in 1970. We develop, market and support a portfolio of software and services that deliver supply chain and advanced retail planning solutions, product lifecycle management, supply chain management, product sourcing, vendor compliance and enterprise management to the global marketplace. Our software and services are designed to bring business value to enterprises by supporting their operations over cloud-based Internet-architected solutions. References to the *Company*, *our products*, *our software*, *our services* and similar references include the appropriate business segment actually providing the product or service.

We provide our software solutions through three major operating segments, which are further broken down into a total of six major product and service groups. The three operating segments are (1) Supply Chain Management (*SCM*), (2) Information Technology (*IT*) Consulting and (3) Other. Today, our customer base is approximately 1,350 companies located in more than 80 countries.

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The SCM segment consists of (i) Logility, Inc. (Logility) which provides supply chain optimization and advance retail planning solutions, as an integrated suite of sales and operations planning, demand optimization, inventory optimization, manufacturing planning and scheduling, supply optimization, retail allocation and merchandise planning, as well as (ii) Demand Management, Inc. (DMI or Demand Management), which provides Software as a Service (SaaS) architected supply chain planning solutions to streamline the forecasting, inventory, production, supply, allocation, distribution and management of products between trading partners, (iii) New Generation Computing (NGC), which provides cloud solutions for supply chain management, product lifecycle management, vendor quality, and vendor compliance and corporate social responsibility (CSR) for both brand retailers and manufacturers, and (iv) Halo, which provides advanced analytics and business intelligence solutions for the supply chain market. The SCM solutions are marketed and sold through both a direct sales team as well as an indirect global VAR (value added reseller) distribution network.

The IT Consulting segment consists of The Proven Method, Inc., an IT staffing and consulting services firm, which provides support for their customers products, such as software enhancements, documentation, updates, customer education, consulting, systems integration services, maintenance and support services. The Other segment consists of American Software ERP, which provides purchasing and materials management, customer order processing, financial, e-commerce and traditional manufacturing solutions, and unallocated corporate overhead expenses.

Previously, we maintained three operating segments: (1) SCM, (2) IT and (3) Enterprise Resource Planning (ERP). Following the organizational realignment during the third quarter fiscal 2018, NGC was repositioned out of the ERP segment and into the SCM segment due to the launch of the new Andromeda platform for Supply Chain Management. There were no changes to the IT segment. Certain prior year amounts have been recasted to conform to fiscal 2018 presentation. The change in reportable segments had no effect on our previously reported consolidated financial position or results of operations.

We derive revenues primarily from four sources: subscriptions, software licenses, services, and maintenance. We generally determine software license and SaaS subscription fees based on the depth of functionality, number of software modules, users and/or sites licensed and/or subscribed. Services and other revenues consist primarily of fees from software implementation, training, consulting services, SaaS, hosting, and managed services. We bill primarily under time and materials arrangements and recognize revenues as we perform services. Subscription and maintenance agreements typically are for a one- to three-year term, commencing at the time of the initial contract. We generally bill these fees annually in advance and then recognize the resulting revenues ratably over the term of the agreement. Deferred revenues represent advance payments or billings for subscriptions, software licenses, services and maintenance billed in advance of the time we recognize the related revenues.

Our cost of revenues for licenses includes amortization of developed technology and capitalized computer software development costs, salaries and benefits and value-added reseller (VAR) commissions. Costs for maintenance and services revenues include the cost of personnel to conduct implementations, customer support and consulting, and other personnel-related expenses as well as agent commission expenses related to maintenance revenues generated by the indirect channel.

Our sales and marketing expenses generally include the salaries and commissions we pay to our direct sales professionals, along with marketing, promotional, travel and associated costs. Our general and administrative expenses generally include the salaries and benefits we pay to executive, corporate and support personnel, as well as office rent, utilities, communications expenses, and various professional fees.

Industry Background

Companies that effectively communicate, collaborate and integrate with their trading partners (customers, suppliers, and carriers) within the extended enterprise or across global supply chain networks can realize significant competitive advantages in the form of lower costs, improved customer service, and increased revenue. Supply chain management refers to the process of managing the complex network of relationships that organizations maintain with external trading partners to forecast demand, source, manufacture, distribute and deliver goods and services to their customers. Supply chain management involves both the activities related to supplying products or services (source, make, move, buy, store, and deliver) as well as the sales and marketing activities that influence the demand for goods and services, such as new product introductions, promotions, pricing and forecasting. The extended enterprise includes sourcing materials and vendor compliance for those activities, as well as product delivery to the customer's customer.

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Today, several market trends are driving organizations to expand collaboration with trading partners along the supply chain. Today's leading manufacturers and distributors have become more responsive to retailers and consumers, often referred to as omni-channel and more recently as Unified Commerce, which has increased the demand for improved planning and business analytics capabilities to model more complexity and effectively position inventory. At the same time, global economic conditions and competitive pressures are forcing businesses to reduce costs, decrease order cycle times and improve operating efficiencies. As a result, manufacturers, distributors and retailers are under pressure to better manage the supply chain as they seek to improve manufacturing efficiency and logistics operations while maintaining flexibility and responsiveness to changing market conditions and specific customer demands. These pressures are compounded by the rate of product churn, increasing globalization and complexity of the interactions among suppliers, manufacturers, distributors, retailers and consumers.

To compete in global markets, businesses must improve the performance of their supply chains, as well as the key functions, processes and technologies that make up an integrated supply chain network. Supply chain planning software solutions create a competitive advantage by modeling the time-phased need for products at a specific location in the business network and enables reducing the cost of goods sold, improving customer service, building global brands and increasing global supply chain visibility as companies move product to the market quicker. Our customers' goal is to provide the right product in the right place at the right time at a competitive price.

The supply chain planning process focuses on demand forecasting, supply and inventory optimization, global sourcing, distribution, transportation and manufacturing planning and scheduling, product lifecycle management (PLM), product sourcing and vendor compliance. Planning software is designed to increase revenues, improve forecast accuracy, optimize production scheduling, streamline global sourcing, reduce inventory costs, decrease order cycle times, reduce transportation costs, and improve customer service. The supply chain execution function addresses procuring, vendor compliance, manufacturing, warehousing, fulfilling orders and distributing products throughout the supply chain.

In order to effectively manage and coordinate supply chain activities, companies require integrated business planning (IBP), sales and operations planning (S&OP), supply chain planning, allocation, sourcing, supply chain execution, supply chain management and supply chain analytics software that provide enterprise systems for integrated communication, optimization and collaboration among the various constituents throughout the supply chain network. This enhanced collaboration synchronizes production plans with demand forecasts, thereby minimizing bottlenecks that lead to production delays, excess inventory and distribution network problems.

Business Segments

Segment 1 Supply Chain Management

Logility, Inc.

Logility, our wholly-owned subsidiary, was incorporated in 1996 and provides supply chain optimization and advanced retail planning solutions, as an integrated suite of sales and operations planning, demand optimization, inventory optimization, manufacturing planning and scheduling, supply optimization, merchandise and assortment planning and retail allocation. The Logility platform includes an industry leading integration layer to import/export data while leveraging artificial intelligence to validate and harmonize the data used in the applications (supply chain master data management).

Logility's solutions enable enterprises to increase their market visibility to build competitive advantages and increase profitability by reducing costs, increasing revenues, improving operational efficiencies and collaborating with

customers and suppliers to more effectively sense and respond to dynamic market conditions. Additionally, Logility's solutions streamline and automate the sales and operations planning (S&OP) process to create and assess business plans that profitably match supply with demand while synchronizing supply chain operations with strategic corporate goals.

Logility offers a multi-brand strategy to address unique market needs: (1) the *Logility Voyager Solutions* suite, which is marketed to companies with distribution-intensive supply chains seeking an optimized planning configured to the unique customer business requirements to drive competitive advantage, (2) the *Demand Solutions*[®] product line, which is marketed as a cloud platform designed for speed of implementation and efficiency on a Software-as-a-Solution (SaaS) platform, (3) New Generation Computing (NGC)'s *Andromeda Supply Chain Management* (SCM) solution which provides cloud solutions for supply chain management, product lifecycle management, vendor quality vendor compliance and corporate social responsibility visibility for both retailers and manufacturers and, (4) *Halo*, which provides supply chain advanced analytics and business intelligence solutions.

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Logility derives revenues primarily from four sources: subscriptions, software licenses, services, and maintenance. Logility generally determines software license and SaaS fees based on the depth of functionality, number of production deployments, users and/or sites licensed. Services and other revenues consist primarily of fees from software implementation, training, consulting services associated with the implementation and support of Logility products. Logility bills for these services primarily under time and materials arrangements and recognizes revenues as it performs services. SaaS, hosting, managed services and maintenance agreements typically are for a one- to three-year term, commencing at the time of the initial product license. Logility generally bills maintenance fees annually in advance under agreements with terms of one to three years, and then recognizes the resulting revenues ratably over the term of the maintenance agreement. Deferred revenues represent advance payments or billings for subscriptions, software licenses, services and maintenance billed in advance of the time Logility recognizes the related revenues.

Logility's cost of revenues for licenses includes amortization of developed technology and capitalized computer software development costs, salaries and benefits along with VAR commissions. Costs for maintenance and services revenues include the cost of personnel to conduct implementations, customer support and consulting, and other personnel-related expenses as well as agent commission expenses related to maintenance revenues generated by the indirect sales channel.

Logility's selling expenses generally include the salaries and commissions it pays to its direct sales professionals, along with marketing, promotion, travel and associated costs. Logility's general and administrative expenses generally include the salaries and benefits it pays to executive, corporate and support personnel, as well as office rent, utilities, communications expenses, and various professional fees.

Demand Management, Inc., a wholly owned subsidiary of Logility, was incorporated in 1985. Demand Management is a leading global provider of supply chain planning software that is designed to be deployed in the cloud, however some customers may deploy on premise. These cloud-architected solutions for manufacturers and distributors are designed to increase forecast accuracy, improve customer service levels, and reduce overall inventory to maximize profits and lower costs. Completely reengineered to run on the latest cloud technology, the *Demand Solutions*[®] *DSX* supply chain planning solution offers functionality for demand planning, collaborative forecasting, inventory planning, advanced planning and scheduling (APS) and S&OP.

Demand Management has worked with supply chain professionals for over 30 years and has incorporated industry best practices and real-world business requirements into its software.

Demand Management markets and sells the *Demand Solutions*[®] *DSX* to brand owners, manufacturers and distributors seeking an efficient supply chain management system delivering a single platform designed for rapid deployment and a simplified operational experience.

Supply Chain and Retail Industry Background

In response to omni-channel and the new Unified Commerce reality (consumers expectations to buy anywhere, deliver anywhere and return anywhere), increasing global competition, volatile market demand, shorter product life cycles, reduced lead times, and the consumers expectations for responsibly sourced materials; companies are continually seeking new ways to enhance the productivity, profitability and compliance of their supply chain and retail operations. Companies that effectively communicate, collaborate and integrate with their trading partners within the extended enterprise network or supply chain can realize significant competitive advantages in the form of lower costs, greater customer loyalty, reduced stock-outs, more efficient sourcing, reduced inventory levels, synchronized supply and demand, and increased revenue. Supply chain management refers to the process of managing the complex global

network of relationships that organizations maintain with external trading partners (customers, suppliers, manufacturers, distributors and retailers) to forecast, source, manufacture, store, allocate and deliver goods and services to the end customer. Supply chain management involves the activities related to merchandizing, sourcing, and supplying products or services (source, make, move, buy, store, and deliver) as well as the sales and marketing activities that influence the demand for goods and services, such as new product introductions, promotions, pricing and forecasting.

Today, several market trends are driving organizations to invest in supply chain and retail planning initiatives. Global economic conditions and competitive pressures are forcing companies to focus on customer desires while reducing costs, decreasing order cycle times and improving operating efficiencies along with omni-channel and Unified Commerce initiatives that are driving the need for more flexibility and better leverage of inventory to meet the needs of customers which include wholesale, branded retail and direct to consumer channels. As a result, manufacturers, brand owners, distributors and retailers are under pressure to better manage the supply chain as they seek to reduce costs, improve manufacturing efficiency and accelerate logistics operations while maintaining flexibility and responsiveness to changing market conditions and specific customer demands. These pressures are compounded by the increasing complexity and globalization of the interactions among suppliers, manufacturers, distributors, retailers and consumers.

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Companies are increasingly deploying supply chain optimization, supply chain management, sourcing and advanced retail planning applications to address their forecasting, supply chain planning, inventory optimization, allocation and distribution requirements. Supply chain optimization and retail planning functions involve the use of information and analysis to facilitate the on-time delivery of the right products to the correct location at the right time and at the optimal total cost. The planning process focuses on forecasting and demand management, inventory and supply optimization, distribution, manufacturing planning and scheduling, sales and operations planning, and retail financial planning and allocation. Supply chain management involves product life cycle management (PLM), sourcing and compliance to get the right products that meets consumer expectations to market on time. Planning software is designed to increase revenues, improve forecast accuracy, optimize manufacturing scheduling, better leverage inventory investments, decrease order cycle times, reduce transportation costs, and improve customer service. Customers are showing increasing interest in planning, sourcing and optimization software that is implemented and accessed in the cloud, known as SaaS.

The supply chain functions also address sourcing, fulfilling orders, distributing products, and delivery to customers throughout the global network. Within the supply chain execution function, organizations are increasing their focus on vendor compliance and sourcing linked with supply chain planning and other enterprise applications, in order to increase the efficient and effective fulfillment of customer orders in both the business-to-business and the business-to-consumer sectors. These multi-enterprise supply chains have heightened the need for robust supply chain master data management (MDM) to provide an accurate digital twin of the supply chain network, allowing enterprise businesses to plan strategically and quickly and accurately respond to dynamic market conditions to harness business opportunities and mitigate risk.

The March 28, 2018 Gartner Inc. report, *Forecast: Enterprise Application Software, Worldwide 2016-2022, 1Q18 Update*, predicts spending on Supply Chain Management software solutions will exceed \$15 billion by 2019 and \$20 billion by 2022. This represents a CAGR of 9.7% through 2022.

In order to effectively manage and coordinate supply chain activities, companies require demand planning, supply planning, inventory optimization, global sourcing product lifecycle management, compliance, retail merchandise planning and allocation, master data management and advanced analytics software that provides for integrated communication, optimization and collaboration among the various stakeholders throughout the supply chain network. This enhanced collaboration optimizes supply chain operations and minimizes bottlenecks that lead to production delays, excess inventory, storage constraints, distribution network problems and out of stock conditions.

We believe that traditional ERP systems alone do not provide the visibility, depth, flexibility or optimization techniques required to effectively meet the planning demands of today's intensely competitive and increasingly dynamic global business environment. Organizations are demanding supply chain solutions that are both modular and scalable to extend ERP functionality, fit the dynamic needs of their businesses, deploy quickly and deliver rapid time-to-benefit.

Additionally, business drivers for more sophisticated supply chain solutions are finding their way downstream. Issues that multi-billion dollar companies faced ten years ago are impacting even the lower end of the under-served SME market today. Increasingly, Logility's customers have to manage offshore sourcing and manufacturing requirements, which often extend lead times and time-to-market. With new, increasingly complex data management needs to monitor global supply networks and deal with the retailers' demand for accurate forecasts, greater supply visibility and higher in-stock performance, the SME market is outgrowing spreadsheets for supply chain planning and turning to proven supply and demand, inventory and replenishment management software, thus extending the addressable market for Logility's software offerings.

Logility Products and Services

Leveraging more than 45 years of planning solutions expertise, Logility has been an innovator in developing and deploying supply chain optimization and advanced retail planning solutions, with its first Internet-based collaborative planning software application implemented in 1996. Logility continues to invest and expand its award-winning solutions, which support the global planning, optimization, collaboration, S&OP as well as merchandise and assortment planning and allocations for retailers.

Logility's experience indicates that distribution-intensive industries face considerable competitive pressure, which is intensified by the high cost of inventory and distribution investments, dynamically changing consumer needs, and variability in overall supply chain performance. These companies need solutions that are capable of delivering significant financial benefits by quickly solving problems that arise in sourcing, manufacturing and distribution operations. Logility solutions are capable of helping these companies collaborate with their trading partners to improve customer service and optimize their sourcing, manufacturing, inventory, distribution and retail networks.

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Logility is a leading provider of collaborative supply chain optimization and advanced retail planning solutions that help small, midsize, large and Fortune 500 companies realize substantial bottom-line results. Logility provides two product suites, *Logility Voyager Solutions* and *Demand Solutions*[®], marketed, sold and distributed through both direct and indirect sales channels. The *Logility Voyager Solutions* suite features advanced analytics capabilities and provides supply chain visibility; demand, inventory and replenishment planning; S&OP, integrated business planning (IBP), supply and inventory optimization; manufacturing planning and scheduling; merchandise and assortment planning and allocation. The *Demand Solutions*[®] *DSX* supply chain planning solution offers functionality for integrated business planning (IBP), sales and operations planning (S&OP), demand optimization, supply optimization, manufacturing optimization, collaboration, data visualization, and workflow optimization for global enterprises with manufacturing, distribution and retail operations who desire a rapid deployment and simplified operations to meet their supply chain needs.

Logility has licensed one or more modules of *Logility Voyager Solutions* or *Demand Solutions* to companies worldwide, including Abercrombie & Fitch, Ann Taylor, Avery Dennison Corporation, Berry Global, Big Lots!, Continental Mills, Fastenal Company, Ferguson Wholesale, Gategroup, Johnstone Supply, Mizuno USA, Mondelez International, New Belgium Brewing Company, Reckitt Benckiser, Siemens Medical Solutions Diagnostics, Trek Bicycle, Verizon Wireless, Urban Outfitters, Warnaco, and VF Corporation. Logility sells products and services through direct and indirect channels. Logility derived approximately 26% of its revenues in the fiscal year ended April 30, 2018 from international sales.

Product Features: Logility Voyager Solutions

Logility Voyager Solutions is a comprehensive cloud-architected planning software suite, which supports both SaaS subscription access as well as on-premise licensing options. It provides supply chain optimization including collaborative planning, forecasting and replenishment, multi-echelon inventory optimization, optimized supply sourcing, production management, merchandise and assortment planning, and allocation capabilities that are designed to increase revenues, reduce inventory, distribution and transportation costs, improve forecast accuracy, decrease order cycle times, manage global sourcing initiatives, optimize production planning and scheduling, streamline logistics operations and improve customer service. *Logility Voyager Solutions* incorporates advanced analytics to drive decision support for critical processes such as demand management, supply and inventory optimization, manufacturing planning and scheduling, retail planning and S&OP.

The *Logility Voyager Solutions* suite is modular and scalable to meet the requirements of global organizations involving tens of thousands of products with complex manufacturing or distribution networks. In addition, the *Logility Voyager Solutions* suite interfaces with a broad range of existing enterprise applications deployed on a variety of technical platforms.

Logility's customers can implement these modules individually, in combinations or as a comprehensive solution suite. The following summarizes key features of the *Logility Voyager Solutions* product suite:

LOGILITY VOYAGER SOLUTIONS FOR SUPPLY CHAIN OPTIMIZATION AND ADVANCED RETAIL PLANNING

These applications allow companies to plan, manage, optimize and measure their supply chain operations and strategic trading partner relationships for direct material procurement, production, logistics, retail and customer order fulfillment. *Logility Voyager Solutions* provides a performance-based architecture that allows companies to manage supply chain processes on an exception basis. Companies can proactively monitor, alert, measure and resolve critical supply chain events both within their own companies and throughout the extended value chain.

SUPPLY CHAIN COLLABORATION

Logility Voyager Solutions accelerates S&OP, as well as strategic trading partner collaboration. *Logility Voyager Solutions* allows companies to accelerate and synchronize demand plans, sales input, direct material procurement, sourcing, fulfillment and financial goals to increase profitability and improve service. *Logility Voyager Solutions* enables companies to streamline and accelerate the entire S&OP process. Companies can more easily track key performance indicators, measure and compare multiple plan performance, optimize sales plans and automate data gathering.

Logility Voyager Integrated Business Planning visualizes, elevates and optimizes strategic and tactical plans for products, channels, resources and investment to achieve business goals, drive shareholder value and increase operational efficiencies.

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Logility Voyager AdapLink delivers tailored supply chain and enterprise integration leveraging predefined templates and incorporating artificial intelligence to validate and harmonize planning and related supply chain master data management with ERP systems such as SAP, Oracle, Microsoft and Infor.

DEMAND OPTIMIZATION

Logility Voyager Solutions provides the visibility to significantly improve forecasting accuracy by creating comprehensive overviews of market demand, new product introductions, product phase-outs, short life cycle products, promotions and inventory policies. As a result, enterprises can build plans that are more closely attuned to the market.

Voyager Demand Planning helps reconcile differences between high-level business planning and detailed product forecasting. Aligning inventory with customer demand, this solution makes it easier to boost service levels, shorten cycle times and reduce inventory obsolescence.

Voyager Life Cycle Planning provides control to model each phase in a product's sunrise-to-sunset lifecycle including introduction, maturity, replacement, substitution and retirement. Using attribute-based modeling, Logility can improve the accuracy of new product introductions, short life cycle and phase-outs, which result in reduced stock-outs and lower obsolescence costs.

Voyager Proportion Profile Planning automates the process of detailed SKU-level forecasting using attributes like style, color and size for large numbers of SKUs. Time-phased profiles meet the market goals for product categories while increasing forecast accuracy at the granular level.

INVENTORY OPTIMIZATION

Logility Voyager Solutions enables enterprises to set optimal inventory targets at each node of a multi-echelon manufacturing or distribution network to match strategic inventory goals and service levels in accordance with your business plan.

Voyager Inventory Optimization optimizes strategic and tactical inventory investments across multi-echelon manufacturing and distribution networks to meet business and service level objectives for complex supply chains with multiple stages of inventory.

Logility Voyager Inventory Planning allows enterprises to effectively measure the tradeoff of finished goods inventory investments and desired customer service levels. This solution dynamically sets time-phased inventory targets based on specific safety stock and order quantity rules.

SUPPLY OPTIMIZATION

Logility Voyager Solutions optimizes material, inventory, production and distribution assets by synchronizing supply and demand. Optimized supply plans are generated based on manufacturing, storage, and transportation constraints as well as various sourcing, production and distribution options.

Voyager Supply Planning optimizes complex sourcing and production decisions to balance supply, manufacturing and distribution constraints based on corporate goals for maximizing profit or minimizing costs.

Voyager Replenishment Planning provides visibility of future customer demand, corresponding product and material requirements, and the actions needed to satisfy those demands.

Voyager Manufacturing Planning and Scheduling optimizes constraint-based manufacturing schedules and evaluates multiple scenarios to determine the optimal trade-off between manufacturing efficiencies, inventory investments and greenhouse gas emissions, providing lower costs and increased product availability.

Voyager Advanced Planning and Scheduling creates optimized schedules that consider machine, personnel, tooling and inventory constraints to drive shorter lead times and reliable product availability.

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RETAIL OPTIMIZATION

Voyager Merchandise Planning and Voyager Assortment Planning create financial merchandise plans for total company and individual store to increase visibility and maintain open to buy plans, margin planning and unit ladder plans at various levels in the merchandise hierarchy.

Voyager Allocation optimizes short term unit sales and stock projections by store and facilitates the automatic replenishment based on daily sales data. Capabilities also include pre-pack optimization to accelerate the receipt and shipment of inventory to specific store locations.

Product Features: Demand Solutions

Demand Solutions proven, sophisticated supply chain software provides a smooth transition from spreadsheet management to robust supply chain planning, reporting, and tracking. It is simple to install and easy to use, yet able to support the entire Integrated Business Planning (IBP) process, which many supply chain experts endorse as a best practice for supply chain planning.

Demand Solutions offers SaaS and on-premises versions of its DSX product platform. Because both solutions are built on the same technology, customers have a clear migration path from one to the other as their needs change. Customers wishing to implement supply chain planning software without making a major up-front investment in software licensing fees can get started on the SaaS version of Demand Solutions DSX by simply paying a monthly subscription fee. The cloud delivery model relieves these customers of the need to buy and maintain their own hardware and the solution can easily scale to support their business growth. Once the solution goes live, stakeholders throughout their supply chain can simply log onto the software to access business data that is relevant to their role.

DSX was introduced in February 2010 and combines the DMI's 30-year history of supply chain experience with the latest technology to create a highly flexible supply chain planning solution. Built on a flexible architecture with configurability, scalability, performance, and security in mind, DSX is the culmination of more than two decades of customer-driven supply chain functionality. The DSX platform was architected to exploit and apply new technologies to provide best-in-class supply chain efficiencies.

Demand Solutions launched DSX SaaS in January 2014. This subscription version of the product platform is designed for manufacturers and distributors who want to streamline and enhance their supply chain planning processes without having to build and maintain their own IT infrastructure. It provides the full functionality of the on-premise version, but without requiring an up-front investment for software licenses and hardware. Rather than committing to a large purchase price, customers simply pay a predictable subscription fee.

Demand Solutions supports both Software-as-a-Service and Infrastructure-as-a-Service. The Company also supports both On-Demand Self Service and Broad Network Access. Because of *Demand Solutions* Web Services integration, customers can use DS-SaaS in conjunction with their system of record regardless of whether it is hosted, SaaS, or on-premise. All product platforms also incorporate social supply chain technology that enables supply chain partners around the world to collaborate in real time using intuitive, always-on social media tools.

The *Demand Solutions* application suite makes it easier to predict future demand and make informed decisions to optimize inventory turns, improve customer service levels, and increase profitability. *Demand Solutions* is a complete time-phased, multi-tiered demand planning and replenishment system and a proven platform for vendor-managed inventory. *Demand Solutions* helps manufacturers, wholesalers, and distributors exchange inventory information in real time, proactively manage demand rather than operate in reactive mode, and increase profitability.

Demand Solutions Forecast Management provides a powerful yet easy-to-use demand planning solution that fits virtually any industry and deploys quickly. The system offers significant flexibility and allows the user to select from among 26 algorithms the forecasting formula that best addresses each item's demand pattern to develop an accurate forecast of future demand.

Demand Solutions Requirements Planning incorporates collaborative planning capabilities to streamline supply activities from the production line through delivery. With instant analysis of the projected demand for unlimited items against current inventory, *Demand Solutions Requirements Planning* recommends the ideal inventory level for each shipping destination, providing valuable visibility up and down the supply chain.

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Demand Solutions Sales & Operations Planning automates and continually analyzes the monthly integrated business planning process, while also giving all supply chain stakeholders (internal and external to the organization) the social media tools to continue collaborating in between planning meetings. There are two annual business plans available for each of the sections of data (bookings, sales, production, inventory, backlog, and shipments): the Annual Plan and the Flexible Plan. Demand Solutions was one of the first S&OP tools on the market and the company has more than 17 years of S&OP implementation experience.

Demand Solutions Advanced Planning and Scheduling is a powerful and easy-to-use production scheduling solution that supports the process and discrete enterprise environment, and quickly produces accurate schedules that take into account machines, personnel, tooling, and inventory constraints. The *Demand Solutions Advanced Planning and Scheduling* software enables manufacturers to balance material, capacity, and shop floor schedules simultaneously to meet customer demand on-time at the lowest costs.

NGC is our wholly-owned subsidiary that provides software solutions for retailers and brand owners primarily in the fashion industries (i.e. apparel, footwear, sewn products and furniture). NGC provides functionality that allows customers to share information and quickly react to rapidly changing market trends, allowing them to accelerate lead times, reduce expenses, improve quality and maximize company revenue and profit.

NGC s provides a comprehensive application suite for retailers and brand owners with the Andromeda cloud platform, including solutions for 1) Product Lifecycle Management (PLM), 2) Supply Chain Management (SCM), 3) Enterprise Resource Planning (ERP), 4) Global Quality Control, 5) Vendor Compliance and 6) Shop Floor Control. Products can be implemented as part of the integrated suite or as stand-alone applications. It is offered in a variety of infrastructures including a multi-tenant SaaS, private cloud or on premise solution.

Product Lifecycle Management. NGC s Andromeda Cloud PLM system can be configured to the specific needs of retailers, fashion brands, and consumer products companies. NGC s Andromeda PLM offers productivity improvements in every area of development. It provides companies with real-time visibility into product data and shares information with Planning, Merchandising, Design, Costing, Sourcing, Manufacturing, and Logistics. NGC s Andromeda PLM allows companies to broadcast information throughout the enterprise to help optimize product lead-time and distribution, company revenue and profit. Andromeda PLM can be deployed as a stand-alone product development solution or an integrated application within the Andromeda cloud platform.

Using NGC Andromeda PLM, companies can:

Increase speed to market by managing workflows in a global, collaborative environment.

Enhance efficiency by using product development calendars to monitor on-time schedules and performance.

Raise gross margins by reducing the cost of goods sold through line item price negotiations, raw material commitments and capacity planning.

Improve product adoption rates by making decisions earlier in the product development cycle.

Reduce sampling costs by establishing product viability prior to issuing sample requests.

Supply Chain Management. NGC's Andromeda Supply Chain Management (SCM) solution enables the demand-driven, agile supply chain. Andromeda SCM helps companies meet the challenges of a rapidly changing manufacturing and distribution environment. With Andromeda SCM, production and logistics information is shared among all members of the extended global supply chain, including retailers, brands, vendors, manufacturers, suppliers, contractors, agents, brokers, carriers and freight forwarders.

Andromeda SCM and Global Sourcing platform allows companies to share information throughout the enterprise to optimize product lead-time and distribution, maximizing company revenue and profit. Andromeda SCM is user-configurable to meet customer requirements and integrates with all applications across the connected enterprise.

Andromeda SCM can be configured to meet customer requirements and integrates with all enterprise applications, allowing companies to:

Compress purchasing lead times by positioning raw materials for planned production cycles or series.

Improve order fulfillment rates by balancing production capacity and product demand.

Shrink markdowns and closeouts by applying postponement techniques to adjust WIP inventories.

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Cut unanticipated airfreight expenses by ensuring on-time deliveries from global production facilities.

Reduce product defects by managing on-site quality audits and making corrections based upon the results *Vendor Compliance*. NGC Andromeda Vendor Compliance solution provides a centralized system to help companies mitigate risk, enforce Corporate Social Responsibility (CSR) initiatives and ensure Good Manufacturing Practices. This cloud-based solution helps retailers and brand owners manage the ever-changing landscape of global Restricted Substances Lists (RSL) and enforce control and accountability for all suppliers, vendors, and other third parties involved in the design, manufacturing and delivery of their products to ensure compliance. By ensuring compliance companies can avoid costly litigation, reduce downstream risks and costs of non-compliance, and win market share by building and maintaining a positive public image.

NGC Andromeda Vendor Compliance allows companies to:

Centralize vendor information to improve global sourcing and vendor management processes.

Evaluate vendor performance with a Scorecard Index based upon on-time deliveries, completion rates and quality scores.

Manage vendor onboarding to streamline the process of adding new vendors.

Reduce the downstream risks and costs of non-compliance.

Avoid costly litigation while building and maintaining a positive public image.

Quality Control. NGC Andromeda Quality Control and mobile solution helps brand owners and retailers identify quality problems faster and reduce chargebacks. Using NGC Quality Control, companies streamline the quality process, schedule quality audits more efficiently, and report on audit results using NGC's Interactive Quality Tablet, which is far more efficient than manual processes. NGC's Quality Control includes multilingual and offline use to support your global vendors. Companies can easily access the necessary product and PO details needed to conduct the various audits from NGC's Andromeda PLM and Andromeda Supply Chain solutions, or it can integrate with a company's current solution(s).

NGC Andromeda Quality Control solution helps companies:

Reduce expenses related to quality by addressing quality problems on the factory floor, before products ship.

Increase QC auditor efficiency by scheduling audits based upon factory clusters and delivery schedules.

Access real-time analytics to identify problems sooner and reduce the risk of cancellations, chargebacks and returns.

Work online and/or offline to adapt to different factory environments.

Halo Products and Services

Halo's advanced analytics will be embedded into the Logility Voyager Solutions advanced analytics platform. These enriched analytics will leverage interactive visualization, machine learning algorithms, and artificial intelligence (AI) to transform both structured and unstructured data to accelerate business planning performance and proactively identify new business opportunities or mitigate risks. Customers on the DMI and NGC platforms will be able to add pre-packaged Halo advanced analytics capabilities to their subscriptions to drive quick insights and appropriate actions for their businesses. In addition, Logility will continue to offer Halo advanced analytics embedded in Logility Voyager Solutions as well as standalone to complement other enterprise systems.

Segment 2 IT Consulting

The Proven Method, Inc.

The Proven Method, Inc., our wholly-owned subsidiary, is a technology services firm that specializes in assisting a diverse customer base to solve business issues with realistic and effective technology solutions. The Proven Method maintains a full-time staff of project management, business consultants and technical specialists possessing a wide range of technical skills, and business applications and industry experience.

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We believe a key differentiator of The Proven Method is its ability to offer flexible solutions to customers based on current economic conditions. We provide solutions based on how our customers are running their businesses, thereby meeting their specific needs. Customers today efficiently manage their technology investments by implementing lower cost technologies to provide a direct and immediate revenue benefit. The Proven Method helps our customers drive revenue and targets customer satisfaction through their awareness of the best technologies available.

The solutions we provide can range from web and mobile applications on multiple platforms to complex Business Intelligence applications and solutions. Business Intelligence consists of the development and implementation of a reporting process for dealing with very large volumes of data and multiple business entities/components. Our customers are Internet savvy and knowledgeable in wireless solutions, social networking and channeling implementations, server and desktop virtualization, and deployment of interactive applications. They rely on The Proven Method to provide a fast return on investment, and our customers' success in turn enhances brand awareness of The Proven Method among other customers and potential customers.

The cross-industry and multiple resource skills The Proven Method has acquired since 1995 enables us to provide services to customers of virtually any type or size. The Proven Method customers benefit from our services in several different ways:

Professional Services / Product Management / Project Management Some rely on The Proven Method to serve in lieu of an in-house applications development group. The Proven Method provides these firms with the management, business and technical experience necessary to run an entire IT organization. Other companies will typically outsource complete application development projects to The Proven Method, particularly when their internal project management and technical personnel face a combination of critical timing and heavy backlog.

Staff Augmentation Other customers call on The Proven Method to provide supplemental management and technical resources for a skill or technical discipline they may not currently possess or if they simply need more of a particular set of skills. The Proven Method enables its customers to leverage their employees who have multiple skills to cover more job functions with fewer resources. Recently, The Proven Method has recruited and staffed very specialized technical resources for its customers to support Big Data, Machine Learning /Artificial Intelligence and Cloud technologies.

CCNS Division We specialize in the following resources in our CCNS Division. The acronym CCNS stands for **Cloud, Collaboration, Network & Security**.

Cloud AWS/Azure Architects, App & Infrastructure Migration Specialists

Data Center Server, Storage, Virtualization Specialists

Network WAN, LAN, WLAN Router, Switch Engineers

Collaboration Voice, Conferencing, Collab App, Video Specialists

Security Private/Hybrid/Public Platform and Systems Architects

Project and Program Managers

Social Media and Analytic Marketing Customers now have the opportunity to understand the analytical results of the activities associated with the social media channels, including the development of marketing plans and

recommendations for optimization based on industry needs and best practices. Services can be provided to implement and manage social media programs as well as train prospective and present customers.

The Proven Method has worked with customers such as: Aon, Aarons Rents, IBM, UPS, Norfolk Southern, Xerox, SunTrust Bank, Coca-Cola, Dycom, Equifax, Kubota Manufacturing of North America, The Home Depot, AT&T, State of Georgia, CompuCom, Zep Inc, Chick-fil-A, Global Payments, Verizon, Catlin Group Ltd, Federal Home Loan Bank of Atlanta, Forsythe Technology, Fulton Paper, AutoTrader.com, Nalco Chemical, Georgia Tech Research Institute, NCR, Fidelity Bank, Barry Wehmiller, Manhattan Associates, Perspecta and numerous other customers throughout the United States.

Segment 3 Other

The Other segment consists of (i) American Software ERP, which provides purchasing and materials management, customer order processing, financial, e-commerce and traditional manufacturing solutions, and (ii) unallocated corporate overhead expenses.

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American Software ERP

Our enterprise solutions are the culmination of more than four decades of customer-driven supply chain functionality providing comprehensive global solutions that link critical functions throughout an enterprise. All of our enterprise solutions support our e-business functions.

The *e-Intelliprise* solution is a web-based ERP system that a customer can run over the Internet, or on their intranet or extranet utilizing the IBM iSeries servers. This allows functions within the ERP system to be easily deployed over the Internet using a dynamic role-based web page capability. Customers can support multiple e-businesses and traditional businesses with full front-to-back office integration, which is critical to successful fulfillment and seamless processing and reporting throughout the enterprise. The *e-Intelliprise* solution is a global system, capable of operating in multiple languages, financial and logistics organizations. *e-Intelliprise* was developed on a flexible enterprise architecture that enables centralized management of enterprise wide processes while allowing delegation of other business process decisions to other levels of the organization.

Our *e-applications* are solutions for conducting business on the Internet that can web-enable specific business functions through integration with existing ERP or legacy systems. Currently, e-applications are available for the following applications: *e-procurement*, *e-store*, *e-expenses*, *e-forms*, *Purchase Order Tracking and Vendor Collaboration*, *Requisition Tracking*, *Shipment Tracking*, *e-process management* and *e-connect*, a seamless, XML-enabled data exchange. We believe that these products represent a cost-effective solution for customers with e-business requirements or simply looking to improve efficiencies through updating and streamlining of business processes.

Our product line consists of software and services that operate on three strategic computer platforms: (1) IBM System z Mainframe or compatible, (2) IBM iSeries, and (3) Intel-based servers and clients that operate Windows.

See Note 9 to the Consolidated Financial Statements for further business segment information.

Customers

We primarily target businesses in the retail, apparel and footwear, consumer packaged goods, chemicals, oil and gas, life sciences, telecommunications, consumer electronics, industrial products and other manufacturing industries. A sample of companies that have purchased one or more of our products or services during the past two fiscal years is as follows:

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<u>Consumer Goods</u>	<u>Chemicals, Oil & Gas, Life Sciences</u>	<u>Retail & Apparel (cont.)</u>	<u>Manufacturing and Other</u>
Australia	Allnex	G & K Services	Actron Air
Bonnie's Foods	BERICAP Holding GMBH	Godiva Chocolatier	Amcor Rigid Plastics USA, L
Comercializadora SA de CV	Berry Global	Goodwill Industries	American Bath Group
Furniture	BP Singapore Pte. Limited	GTM Sportswear	Ancestry.com Inc.
Hennison Corporation	Bracco Imaging S.p.A.	Hunkemoller International BV	Avent, Inc
Health & Beyond Inc.	Chamberlain Group	International Uniform, Inc .	Briggs & Stratton
Building.com	CooperVision	Janouras Custom Design, Ltd.	Busch- Transou, L.C.
Super Holdings, LLC	Croda Europe Limited	Jaya Apparel, LLC	Cintas Corporation
Coffee Company	Dow Chemical Company	Jenny Yoo Collections	Corning Cable Systems
Francis	EGO Pharmaceuticals, PTY LTD	Jerry Leigh Entertainment	Cycles Lambert, Inc.
Age, LLC	Genzyme Diagnostics	Jockey International	Dassault Falcon Jet
er & Company	Infineum	John Paul Richard	Ficosota Ltd., Ital Food S.A.
Beverages Limited	Kremers Urban Pharmaceuticals	Joseph Ribkoff	Follett Corporation
Group AB	Norbrook Laboratories	Jump Design Group, Inc.	Gardner- White Furniture
ux S.E.A. Pte Ltd	Norgine	Just Fabulous	Henley Enterprises, Inc.
y	Novartis Pharma Services	Lacrosse Footwear	Hilco
s Brewing Company	Omega Pharma International NV	Land n Sea	Husqvarna AB
Hirsch	OneMed Holdings	Landau Uniform	Hy- Ko Products
ven, Inc.	Sandoz	Legendary Whitetails	Interlock USA, Inc.
Laboratories Worldwide	Scott Specialties, Inc .	Liz Claiborne	Intertape Polymer Group
n Beach	Sigma- Aldrich Corporation	Lord Daniel Sportswear	It Works Marketing Inc.
s Wine, Spirits and Beer Brands	Smith & Nephew	Lucky Zone	Johnson Controls
aki	Sunovion Pharmaceuticals, Inc .	Manhattan Beachwear, LLC	KALE HAVACILIK Sanayi
plot Company	Thermo Fisher Scientific	Men s Wearhouse	M&G DuraVent
Family Wines	<u>Retail & Apparel</u>	Nebraska Furniture Mart	Mayville Engineering Compa
Moore Paint Company, Inc	5.11Tactical	New Era Cap Co., Inc.	Nexans
n Technology Company	A+ School Apparel	Nicole Miller	Nuplex Industries
set Group AG	Accent Décor	Orchard Brands	OFS Fitel, LLC
z Brothers International	Aeropostale	Orvis	ORBIS Corporation
and Doug	AGS Sports, Inc.	Peds Legwear	Parker Hannifin Corporation
Health Care	Aktieselskabet AF	PVH Corp.	Pattonair Ltd.
entertainment	Alberto Makali	Ralph Lauren	Quality Steel Corporation
USA	American Textile	Rawlings Sporting Goods	Randa Accessories
ez International	Ann Taylor	Red Wing Shoe Company	Reliable Automatic Sprinkler
nk	Asics	Renfro	Rockler Companies, Inc.
Drinks B.V.	Barbeques Galore Limited	Rhone Apparel, Inc.	Sandvik
Coffee, Inc .	BBC International	Rocky Brands	Seagate Technology LLC
	Bernard Cap Co., Inc.	Siemens Medical Solutions Diagnostics	Sonoco Products
	Big Lots!	SPANX	Southwire
	Billabong International	Spartan Sportswear	TD Automotive Compressor
	Unlimited	Sport Obermeyer	Timken

Industries	Bioworld Merchandising	Starbucks	Universal Fiber Systems
& Gamble	Biscotti	Stony Apparel	Walzcraft
LC	Blair Corporation	Summit Resource International	West Chester Protective Gear
Benckisen	Bluestem, Inc.	Super Amart Pty Ltd	
oods	Bobs Discount Furniture	Swatfame	<u>Wholesale Distributio</u>
e Industries	Boots UK, Ltd.	The Aldo Group	American Hotel Register Com
and Greenleaf, Inc.	Broder Brothers	The Echo Design Group	Amerisource Bergen Specialt
Company	Brooks Brothers Group, Inc.	The Foschini Group Pty	Balkamp, Inc.
Black & Decker	C&A Mexico	The Home Depot	ChemPoint
Delight Beverages Company	Canada Goose	Topson Downs	CHF Industries
ater Brewing Company, LLC	Charles River Apparel	Town & Country Living	Dealer Tire
resh Foods	Color Image Apparel, Inc.	Tristan & America	Fastenal Company
ida Group	Delta Apparel	T- Shirt International	Fintyre S.p.A.
ok County Creamery Association	Destination XL	Unifirst Corp	Groupe Seb Holdings
Seafoods Corporation	Dutch, LLC	Upper Right Marketing	Johnstone Supply
Stephen (EMEA) GmbH	Dynasty Apparel	Urban Outfitters	RLS Shared Services, LLC
<u>Telecommunications</u>	Elan International	Valley Apparel LLC	Screwfix
ar Corporation	Everlast Worldwide	Vesi Sportswear	Southern Eagle Distributing,
	Evy of California	VF Corporation	Standard Motor Products
	Fam Brands	Watters	The Gem Group, Inc.
	Fanatics Apparel, Inc.	Williamson- Dickie Manufacturing	Trelleborg Wheel Systems
	Fashion Avenue Knits	Wohali Outdoors	US Autoforce
Wireless	FGL Group	Wolverine Worldwide	
	Finish Line	Xcel Brands	
	Foot Locker, Inc.		

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We do not have a customer who has more than 10% of fiscal 2018 revenues. We typically experience a slight degree of seasonality, reflected in a slowing of services revenues during the annual winter holiday season, which occurs in the third quarter of our fiscal year. We are not reliant on government-sector customers.

Integrated System Design

While customers can use our software applications individually, we have designed them to be combined as integrated systems to meet unique customer requirements. The user may select virtually any combination of modules to form an integrated solution for a particular business problem. The license for such a solution could range from one single module to a multi-module, multiple-user solution incorporating the full range of our products.

Customers frequently require services beyond those provided by our standard support/maintenance agreement. To meet those customers' needs, we established a separate professional services division that provides specialized business and software implementation consulting, on-site installation, system-to-system interfacing and extensive training. We provide these services, frequently referred to as systems integration services, for an additional fee, normally under a separate contract based upon time and materials utilized.

Sales and Marketing

We globally market our products through direct and indirect sales channels. We conduct our principal sales and marketing activities from corporate headquarters in Atlanta, Georgia, and have North American sales and/or support offices in Boston, Chicago, Dallas, Indianapolis, New York, St. Louis, Miami, Pittsburgh and San Diego. We manage sales and/or support outside of North America from our international offices in the United Kingdom, Sweden, Germany, The Netherlands, India, New Zealand and Australia.

In addition to our employee sales force, we have developed a network of Value Added Resellers (VAR) who assist in selling our products globally. We intend to utilize these and future relationships with software and service organizations to enhance our sales and marketing position. These independent distributors and resellers, located in North America, South America, Mexico, Europe, South Africa, and the Asia/Pacific region, distribute our product lines domestically and in foreign countries. These vendors typically sell their own consulting and systems integration services in conjunction with contracts for our products. Our global distribution channel consists of approximately 36 organizations with sales, implementation and support resources serving customers in more than 80 countries.

We support our sales activities by conducting a variety of marketing programs including public relations, direct marketing, advertising, trade shows, product seminars, industry speakers, user group conferences and ongoing customer communication and industry analyst programs. We also participate in industry conferences such as those organized by the Association for Operations Management (APICS), the Council of Supply Chain Management Professionals (CSCMP), formerly called the Council of Logistics Management (CLM), and the Institute for Supply Management (ISM).

We also engage in third-party software alliance programs with other software vendors. These programs generally provide some type of assistance for developing or marketing software products, which are compatible or complimentary with products of the other party. Under one such program, DMI was designated a Microsoft Gold Certified Partner to provide integrated supply chain products for Microsoft's Dynamics GP and NAV solutions.

Licenses and Subscriptions

Like many business application software firms, our software revenue consists principally of fees generated from licensing our software products. In consideration of the payment of license fees, we typically grant non-exclusive, nontransferable, perpetual licenses, which are primarily business segment- and user-specific and geographically restricted. Our standard license agreement contains provisions designed to prevent disclosure and unauthorized use of our software. In these agreements, we warrant that our products will function in accordance with the specifications set forth in our product documentation.

The prices for our products are typically functions of the depth of functionality, number of production deployments, users and sites for which the solution is deployed.

A growing segment of product revenue is coming from Software as a Service (SaaS) contracts where the SaaS subscription fees are based on the depth of functionality, number of production deployments, users and/or sites licensed.

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Customer Service and Support

We provide the following services and support to our customers:

Cloud and Managed Services. We offer our customers the option to deploy Voyager, Demand Solutions and New Generation Solutions in a SaaS, hosted or on-premise model. Cloud Services provides companies a choice in deployment methodology and services that best suit their individual needs and allows them to evolve as their business changes; moving between SaaS, on-premise, and managed services as their IT strategies transform. Managed Services leverage our resources to assist and augment the customer's technical and operational needs on a day-to-day basis.

Implementation Support. We offer our customers a professional and proven implementation program that facilitates rapid implementation of our software products. Our consultants help customers define the nature of their project and subsequently proceed through the implementation process. We provide training for all users and managers involved. We first establish measurable financial and logistical performance indicators and then evaluate them for conformance during and after implementation. Additional services beyond implementation can include post-implementation reviews and benchmarks to further enhance the benefits to customers.

Implementation: General Training Services. We offer our customers post-delivery professional services consisting primarily of implementation and training services, for which we typically charge on a daily basis. Customers that purchase implementation services receive assistance in integrating our solution with existing software applications and databases. Implementation of our products typically requires three to nine months, depending on factors such as the complexity of a customer's existing systems, the number of modules purchased, and the number of end users.

Product Maintenance and Updates: Support Services. We provide our customers with ongoing product support services. Typically, we enter into support or maintenance contracts with customers for an initial one- to three-year term, billed annually in advance, at the time of the product license with renewal for additional periods thereafter. Under these contracts, we provide telephone consulting, product updates and releases of new versions of products previously purchased by the customer, as well as error reporting and correction services. We provide ongoing support and maintenance services on a seven-days-a-week, 24-hours-a-day basis through telephone, electronic mail and web-based support, using a call logging and tracking system for quality assurance.

Research and Development

Our future success depends in part upon our ability to continue to enhance existing products, respond to changing customer requirements, develop and introduce new or enhanced products, and keep pace with technological developments and emerging industry standards. We focus our development efforts on several areas, including, but not limited to, enhancing operability of our products across distributed and changing heterogeneous hardware platforms, operating systems and relational databases, and adding functionality to existing products. These development efforts will continue to focus on deploying applications within a multi-tiered ERP and supply chain environment, including the Internet.

Logility's current release of *Logility Voyager Solutions* is version 1704, released in January 2018. Version 1704 uses a cloud-based architecture for maximum scalability and messaging functionality that supports the increasingly distributed nature of supply chain planning, global sourcing, supply chain execution, collaborative commerce and advanced retail planning. *Logility Voyager Solutions* interfaces with software from leading ERP vendors such as SAP, Oracle and Infor through its industry leading supply chain MDM solution, Logility Voyager AdapLink which offers data validation, harmonized transformation simplified with standardized integration templates.

The current release of the traditional *Demand Solutions* products is DSX which was introduced in January 2014. These products are designed to work with a wide variety of MRP, ERP and legacy enterprise applications.

Our cloud-architected solutions designed for SaaS deployment with master data management built in will be important for our long-term growth. As of April 30, 2018, we employed 98 persons in product research, development and enhancement activities.

Competition

Our competitors are diverse and offer a variety of solutions directed at various aspects of the supply chain, retail and general enterprise application market. Our existing competitors include but are not limited to:

Large ERP application software vendors such as SAP, Oracle and Infor, each of which offers sophisticated ERP solutions that currently, or may in the future, incorporate supply chain management, advanced planning and scheduling, warehouse management, transportation, collaboration or sales and operations planning software modules;

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Vendors focusing on the supply chain application software market, including, but not limited to, vendors such as JDA Software, ToolsGroup and Kinaxis;

Other business application software vendors that may broaden their product offerings by internally developing, or by acquiring or partnering with independent developers of, supply chain management software; and

Internal development efforts by corporate information technology departments.

We also expect to face additional competition as other established and emerging companies enter the market for advanced retail planning and supply chain management software and/or introduce new products and technologies. In addition, current and potential competitors have made and may continue to make strategic acquisitions or establish cooperative relationships among themselves or with third parties, thereby increasing the ability of their products to address the needs of our prospective customers. Accordingly, it is possible that new competitors or alliances among current and new competitors may emerge and rapidly gain significant market share. Increased competition could result in fewer customer orders, reduced gross margins and loss of market share.

The principal competitive factors in the target markets in which we compete include product functionality and quality, domain expertise, integration technologies, product suite integration, breadth of products and related services such as customer support, training and implementation services. Other factors important to customers and prospects include:

customer service and satisfaction;

ability to provide relevant customer references;

compliance with industry-specific requirements and standards;

flexibility to adapt to changing business requirements;

ability to generate business benefits;

rapid payback and measurable return on investment;

vendor financial stability and company as well as product reputation; and

initial license price, cost to implement and long term total cost of ownership.

Many of our competitors and potential competitors have a broader worldwide presence, significantly greater financial, technical, marketing and other resources, greater name recognition, and a larger installed base of customers than we

have. Some competitors have become more aggressive with their prices, payment terms and issuance of contractual implementation terms or guarantees. In order to be successful in the future, we must continue to develop innovative software solutions and respond promptly and effectively to technological change and competitors' innovations. We may also have to lower prices or offer other favorable terms. Our competitors may be able to respond more quickly to new or emerging technologies and changes in customer requirements or devote greater resources to the development, promotion and sale of their products.

We believe that our principal competitive advantages are our comprehensive, single platform solutions, our list of referenceable customers, the ability of our solutions to quickly generate business benefits for our customers, our substantial investment in product development, our deep domain expertise, the ease of use of our software products, our customer support and implementation services, our ability to deploy quickly, and our ability to deliver rapid return on investment for our customers.

Proprietary Rights and Licenses

Our success and ability to compete are dependent in part upon our proprietary technology. To protect our proprietary technology, we rely on a combination of copyright and trade secret laws, confidentiality procedures and contractual provisions, which may afford only limited protection. In addition, effective copyright and trade secret protection may be unavailable or limited in certain foreign countries. Although we rely on the limited protection afforded by such confidential and contractual procedures and intellectual property laws, we also believe that factors such as the knowledge, ability, and experience of our personnel, new product developments, frequent product enhancements, reliable maintenance and timeliness and quality of support services are essential to establishing and maintaining a technology leadership position. The source code for our proprietary software is protected as a trade secret and as a copyrighted work. Generally, copyrights on our products expire 95 years after the year of first publication of each product. We enter into confidentiality or license agreements with our employees, consultants and customers, and control access to and distribution of our software, documentation and other proprietary information and deliver only object code (compiled source code) to our customers. In addition, we have registered certain trademarks and have registration applications pending for other trademarks.

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We provide our software products to customers under non-exclusive license agreements. As is customary in the software industry, in order to protect our intellectual property rights, we do not sell or transfer title to our products to our customers. Although the license agreements place restrictions on the customer's use of our products, unauthorized use of our products nevertheless may occur.

Despite measures we have taken to protect our proprietary rights, unauthorized parties may attempt to reverse engineer or copy aspects of our products or obtain and use information that we regard as proprietary. Policing unauthorized use of our products is difficult and expensive. In addition, litigation may be necessary in the future to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on our business, operating results and financial condition.

In the future, we may increasingly be subject to claims of intellectual property infringement as the number of products and competitors in our industry segment grows and the functionality of products in different industry segments overlaps. Although we are not aware that any of our products infringe upon the proprietary rights of third parties, there can be no assurance that third parties will not claim infringement by us with respect to current or future products. In addition, we may initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Any such claims against us, with or without merit, as well as claims initiated by us against third parties, can be time consuming and expensive to defend, prosecute or resolve. Moreover, an adverse outcome in litigation or similar adversarial proceedings could subject us to significant liabilities to third parties, require the expenditure of significant resources to develop non-infringing technology, require a substantial amount of attention from management, require disputed rights to be licensed from others, require us to enter into royalty arrangements or require us to cease the marketing or use of certain products, any of which would have a material adverse effect on our business, operating results and financial condition. To the extent that we desire or are required to obtain licenses to patents or proprietary rights of others, there can be no assurance that any such licenses will be made available on terms acceptable to us, if at all.

We have re-licensed, and expect in the future to re-license, certain software from third parties for use in connection with our products. There can be no assurance that these third-party software vendors will not change their product offerings or that these software licenses will continue to be available to us on commercially reasonable terms, if at all. The termination of any such licenses or product offerings, or the failure of the third-party licensors to adequately maintain or update their products, could result in delays in our ability to ship certain of our products while we seek to implement technology offered by alternative sources. Any required replacement licenses could prove costly. Further, any such delay, if it becomes extended, could result in a material adverse effect on our results of operations.

Company Strategy

Our objective is to become a leading provider of collaborative supply chain optimization, advanced retail planning and supply chain management solutions to enable small, midsize, large and Fortune 500 companies to optimize their operations associated with the planning, sourcing, manufacture, storage, distribution and allocation of products. Our strategy includes the following key elements:

Leverage and Expand Installed Base of Customers. We currently target businesses in the consumer goods, food and beverage, retail, apparel and sewn products, life sciences, chemicals, and wholesale distribution industries. We intend to continue to leverage our installed base of more than 1,250 customers to introduce additional functionality, product upgrades, and complementary modules. In addition, we intend to expand sales to new customers in our existing vertical markets and to target additional vertical markets over time. We will continue our focus on offering a

best-in-class cloud solution and expect the growth trends we have experienced in this area to continue because many new and existing customers are pursuing cloud strategies for their business applications.

Continue to Expand Sales and Marketing. We intend to continue to pursue an increased share of the market for supply chain software solutions by expanding our sales and marketing activities. We believe our competitive advantages include providing rapid implementation, easy-to-maintain configuration, and quick time-to-benefit across the full spectrum of customer operations. Logility intends to continue building a direct sales force that is focused on selected vertical markets, such as consumer goods, retail, life sciences, wholesale distribution and manufacturing supply chains. NGC Software intends to continue to focus on the fashion product industries such as apparel, footwear, sewn products, and furniture, adding sales and marketing resources when appropriate.

Expand Indirect Channels to Increase Market Penetration. We believe that key relationships with VARs will increase sales and expand market penetration of our products and services. This experienced global distribution network significantly expands Logility's reach and provides sales, implementation and support resources serving customers in more than 80 countries.

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Maintain Technology Leadership. We believe we are a technology leader in the field of collaborative supply chain optimization solutions and advanced business analytics. We intend to continue to provide innovative, advanced solutions and services to this market. We believe that Logility was one of the earliest providers of SCM software solutions on a client/server platform and on Windows, and the first to introduce a collaborative supply chain planning solution that operates over the Internet. We intend to continue developing and introducing new and enhanced products and keeping pace with technological developments and emerging industry standards.

Invest Aggressively to Build Market Share. We intend to continue investing to expand our sales force, research and development efforts, and consulting infrastructure, balanced with our goal of increasing profitability. We believe these investments are necessary to increase our market share and to capitalize on the growth opportunities in the market.

Acquire or Invest in Complementary Businesses, Products and Technologies. We believe that select acquisitions or investments may provide opportunities to broaden our product offering to provide more advanced solutions for our target markets. We will evaluate acquisitions or investments that will provide us with complementary products and technologies, expand our geographic presence and distribution channels, penetrate additional vertical markets with challenges and requirements similar to those we currently meet, and further solidify our leadership position within the SCM market. In fiscal 2015, we acquired MID Retail, Inc. (MRI), announced on May 30, 2014, to extend our reach into retail operations and expand our ability to help customers improve their Omni-Channel performance. On August 23, 2016 we announced the acquisition of AdapChain to provide supply chain Master Data Management and streamlined integration between our portfolio of planning and optimization solutions to third party software applications. In fiscal 2018, we acquired certain assets of privately held Innovare Holding Co., Incorporated, a Delaware corporation and its subsidiaries (collectively, Halo) effective November 21, 2017. Halo is a supplier of advanced analytics and business intelligence solutions, for the supply chain market. . These enriched analytics will leverage interactive visualization, machine learning algorithms, and artificial intelligence (AI) to transform both structured and unstructured data to accelerate business planning performance and proactively identify new business opportunities or mitigate risks.

Focus on Integrated Collaborative Planning and Supply Chain Execution Solution. We believe Logility is one of the few providers of truly integrated SCM software solutions addressing demand, supply and advanced retail planning as well as transportation logistics requirements. *Logility Voyager Solutions* provides a comprehensive suite for supply chain planning and transportation management with collaboration at its core, streamlining business processes between both internal and external trading partners. We intend to continue focusing Logility's development initiatives on enhancing its end-to-end solution, expanding its embedded performance management architecture and introducing additional capabilities that complement its integrated solution suite.

Increase Penetration of International Markets. In the fiscal year ended April 30, 2018, we generated 19% of our total revenues from international sales, resulting from marketing relationships with a number of international distributors. Logility, along with its subsidiary, DMI, has over 36 VARs in its indirect channel where the majority of the VARs are international. This experienced global distribution network expands Logility's reach and provides sales, implementation and support resources, serving customers in more than 80 countries. We intend to further expand our international presence by creating additional relationships with distributors in Africa, Asia, Australia, Europe, North America and South America.

Expand Strategic Relationships. We intend to develop strategic relationships with leading enterprise software, systems integrators and service providers to integrate our software solutions into their services and products and to create joint marketing opportunities. In addition, Logility has developed a network of international agents who assist in the sale and support of its products. We intend to utilize these and future relationships with software and service organizations to enhance our sales and marketing position.

Continue to Focus on Providing High Quality Customer Service. Providing high quality customer service is a critical element of our strategy. We intend to continue investing in technology and personnel to accommodate the needs of our growing customer base. We will continue to seek new ways to improve service to our customers.

Leverage Cloud Strategy. Our cloud computing initiative accelerates customer's deployment of our industry leading supply chain and advanced retail planning solutions. Our cloud strategy includes SaaS licensing and services designed to enable the optimization of the customer's supply chain to reflect their global business needs.

Serve Small, Midsize and Large Business Markets. Our broad product portfolio allows us to address the unique business needs and complexity of a wide range of enterprises with small, midsize and large global operations.

There can be no assurance, however, that we will be successful in implementing the strategies outlined above.

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Employees

As of April 30, 2018, we had 462 full-time employees, including 98 in product research, development and enhancement, 47 in customer support, 189 in professional services, 84 in marketing, sales and sales support, and 44 in accounting, facilities and administration. We believe that our continued success will depend in part on our ability to continue to attract and retain highly skilled technical, marketing and management personnel, who may be in great demand. We believe our employee relations are good. We have never had a work stoppage and no employees are represented under collective bargaining arrangements.

Available Information

We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to these reports available free of charge on or through our website, located at <http://www.amsoftware.com>, as soon as reasonably practicable after they are filed with or furnished to the Securities and Exchange Commission (SEC). Reference to our website does not constitute incorporation by reference of the information contained on the site and should not be considered part of this document.

ITEM 1A. RISK FACTORS

A variety of factors may affect our future results and the market price of our stock.

We have included certain forward-looking statements in Management's Discussion and Analysis of Financial Condition and Results of Operations and elsewhere in this Form 10-K. We may also make oral and written forward-looking statements from time to time, in reports filed with the SEC and otherwise. We undertake no obligation to revise or publicly release the results of any revisions to these forward-looking statements based on circumstances or events which occur in the future, unless otherwise required by law. Actual results may differ materially from those projected in any such forward-looking statements due to a number of factors, including those set forth below and elsewhere in this Form 10-K.

We operate in a dynamic and rapidly changing environment that involves numerous risks and uncertainties. The following section lists some, but not all, of the risks and uncertainties that we believe may have a material adverse effect on our business, financial condition, cash flow or results of operations. In that case, the trading price of our securities could decline and you may lose all or part of your investment in our Company. This section should be read in conjunction with the audited Consolidated Financial Statements and Notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Form 10-K.

We cannot predict every event and circumstance that may affect our business, and therefore the risks and uncertainties discussed below may not be the only ones you should consider.

The risks and uncertainties discussed below are in addition to those that apply to most businesses generally. Furthermore, as we continue to operate our business, we may encounter risks of which we are not aware at this time. These additional risks may cause serious damage to our business in the future, the impact of which we cannot estimate at this time.

RISK FACTORS RELATED TO THE ECONOMY

Disruptions in the financial and credit markets, a slow economic recovery, and other external influences in the U.S. and global markets may reduce demand for our software and related services, which may negatively affect our revenues and operating results.

Our revenues and profitability depend on the overall demand for our software, professional services and maintenance services. Regional and global changes in the economy and financial markets, such as the severe global economic downturn in 2008 followed by a slow and relatively weak recovery, have resulted in companies reducing their spending for technology projects generally and delaying or reconsidering potential purchases of our products and related services. Adverse conditions in credit markets, lagging consumer confidence and spending, the fluctuating cost of fuel and commodities and their effects on the U.S. and global economies and markets are examples of negative factors that have delayed or canceled certain potential customer purchases. Furthermore, the uncertainty posed by the long-term effects of conflicts in the Middle East, terrorist activities, related uncertainties and risks, and other geopolitical issues may also adversely affect the purchasing decisions of current or potential customers. Weakness in European economies may adversely affect demand for our products and services, both directly and by adversely affecting business conditions that our customers face, as many of our U.S. customers rely heavily on European sales. There can be no assurance that government responses to the disruptions in the financial markets or to weakened economies will sufficiently restore confidence, stabilize markets or increase liquidity and the availability of credit.

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We are a technology company selling technology-based solutions with total pricing, including software and services, in many cases exceeding \$500,000. Reductions in the capital budgets of our customers and prospective customers could have an adverse impact on our ability to sell our solutions. These economic and political conditions may reduce the willingness or ability of our customers and prospective customers to commit funds to purchase our products and services, or to renew existing post-contract support agreements, or their ability to pay for our products and services after purchase. Future declines in demand for our products or services, or a broadening or protracted extension of these conditions would have a significant negative impact on our revenues and operating results.

There may be an increase in customer bankruptcies due to weak economic conditions.

We have in the past, and may in the future, be affected by customer bankruptcies that occur in periods subsequent to the software license sale. During weak economic conditions there is an increased risk that some of our customers will file a petition for bankruptcy. When our customers file a petition for bankruptcy, we may be required to forego collection of pre-petition amounts owed and to repay amounts remitted to us during the 90-day preference period preceding the filing. Accounts receivable balances related to pre-petition amounts may in some of these instances be large, due to extended payment terms for software license fees and significant billings for consulting and implementation services on large projects. The bankruptcy laws, as well as the specific circumstances of each bankruptcy, may severely limit our ability to collect pre-petition amounts, and may force us to disgorge payments made during the 90-day preference period. We also face risk from international customers that file for bankruptcy protection in foreign jurisdictions, as the application of foreign bankruptcy laws may be more difficult to predict. Although we believe that we have sufficient reserves to cover anticipated customer bankruptcies, there can be no assurance that such reserves will be adequate, and if they are not adequate, our business, operating results and financial condition would be adversely affected.

Changes in the value of the U.S. dollar, as compared to the currencies of foreign countries where we transact business, could harm our operating results.

Our international revenues and the majority of our international expenses, including the wages of some of our employees, have been denominated primarily in currencies other than the U.S. dollar. Therefore, changes in the value of the U.S. dollar as compared to these other currencies may adversely affect our operating results. We do not hedge our exposure to currency fluctuations affecting future international revenues and expenses and other commitments. For the foregoing reasons, currency exchange rate fluctuations have caused, and likely will continue to cause, variability in our foreign currency denominated revenue streams and our cost to settle foreign currency denominated liabilities.

RISK FACTORS RELATED TO COMPETITION

Our markets are very competitive, and we may not be able to compete effectively.

The markets for our solutions are very competitive. The intensity of competition in our markets has significantly increased, in part as a result of the slow growth in investment in IT software as a result in slow overall GDP growth within the United States and other geographic regions in which we operate. We expect this intensity of competition to increase in the future. Our current and potential competitors have made and may continue to make acquisitions of other competitors and may establish cooperative relationships among themselves or with third parties. Any significant consolidation among ERP or supply chain software companies could adversely affect our competitive position. Increased competition has resulted and in the future could result in price reductions, lower gross margins, longer sales cycles and loss of market share. Each of these developments could have a material adverse effect on our operating performance and financial condition.

Many of our current and potential competitors have significantly greater resources than we do, and therefore we may be at a disadvantage in competing with them.

We directly compete with other supply chain software vendors, including SAP, Oracle Corporation, JDA Software Group, Kinaxis, Inc., Infor, Inc., Manhattan Associates and others. Some of our current and potential competitors have significantly greater financial, marketing, technical and other competitive resources than we do, as well as greater name recognition and a larger installed base of clients. The ERP software market has experienced significant consolidation. This consolidation has included numerous mergers and acquisitions. It is difficult to estimate what long-term effect these acquisitions will have on our competitive environment. We have encountered competitive situations where we suspect that large competitors, in order to encourage customers to purchase licenses of non-retail specific applications and gain retail market share, have also offered to license at no charge certain retail software applications that compete with our solutions. If competitors such as Oracle and SAP AG and other large private companies are willing

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to license their retail and/or other applications at no charge, this may result in a more difficult competitive environment for our products. In addition, we could face competition from large, multi-industry technology companies that have historically not offered an enterprise solution set to the retail supply chain market. We cannot guarantee that we will be able to compete successfully for customers against our current or future competitors, or that such competition will not have a material adverse effect on our business, operating results and financial condition. Also, some prospective buyers are reluctant to purchase applications that could have a short lifespan, as an acquisition could result in the application's life being abruptly cut short. In addition, increased competition and consolidation in these markets is likely to result in price reductions, reduced operating margins and changes in market share, any one of which could adversely affect us. If customers or prospects want to reduce the number of their software vendors, they may elect to purchase competing products from a larger vendor than us since those larger vendors offer a wider range of products. Furthermore, some of these larger vendors, such as Oracle, may be capable of bundling their software with their database applications, which underlie a significant portion of our installed applications. When we compete with these larger vendors for new customers, we believe that these larger businesses often attempt to use their size as a competitive advantage against us.

Many of our competitors have well-established relationships with our current and potential clients and have extensive knowledge of our industry. As a result, they may be able to adapt more quickly to new or emerging technologies and changes in client requirements or to devote greater resources to the development, promotion and sale of their products than we can. Some competitors have become more aggressive with their prices and payment terms and issuance of contractual implementation terms or guarantees. We may be unable to continue to compete successfully with new and existing competitors without lowering prices or offering other favorable terms. Furthermore, potential customers may consider outsourcing options, including application service providers, data center outsourcing and service bureaus, as alternatives to licensing our software products. Any of these factors could materially impair our ability to compete and have a material adverse effect on our operating performance and financial condition.

We also face competition from the corporate IT departments of current or potential customers capable of internally developing solutions and we compete with a variety of more specialized software and services vendors, including:

Internet (on demand) software vendors;

single-industry software vendors;

merging enterprise resource optimization software vendors;

human resource management software vendors;

financial management software vendors;

merchandising software vendors;

services automation software vendors; and

outsourced services providers.

As a result, the market for enterprise software applications has been and continues to be intensely competitive. Some competitors are increasingly aggressive with their pricing, payment terms and/or issuance of contractual warranties, implementation terms or guarantees. Third-party service companies may offer competing maintenance and implementation services to our customers and thereby reduce our opportunities to provide those services. We may be unable to continue to compete successfully with new and existing competitors without lowering prices or offering other favorable terms to customers. We expect competition to persist and intensify, which could negatively affect our operating results and market share.

Due to competition, we may change our pricing practices, which could adversely affect operating margins or customer ordering patterns.

The intensely competitive markets in which we compete can put pressure on us to reduce our prices. If our competitors offer deep discounts on certain products or services in an effort to recapture or gain market share or to sell other products or services, we may need to lower prices or offer other favorable terms in order to compete successfully. For these and other reasons, in the future we may choose to make changes to our pricing practices. For example, we may (1) offer additional discounts to customers, (2) increase (or decrease) the use of pricing that involves periodic fees based on the number of users of a product, or (3) change maintenance pricing. Such changes could materially and adversely affect our margins, and our revenues may be negatively affected if our competitors are able to recapture or gain market share.

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RISK FACTORS RELATED TO OUR OPERATIONS

Our growth is dependent upon the successful further development of our direct and indirect sales channels.

We believe that our future growth will depend on developing and maintaining successful strategic relationships with systems integrators and other technology companies. Our strategy is to continue to increase the proportion of customers served through these indirect channels. We are currently investing, and plan to continue to invest, significant resources to develop these indirect channels. This investment could adversely affect our operating results if these efforts do not generate license and service revenue necessary to offset our investment. Also, our inability to partner with other technology companies and qualified systems integrators could adversely affect our results of operations. Because lower unit prices are typically charged on sales made through indirect channels, increased indirect sales could reduce our average selling prices and result in lower gross margins. In addition, sales of our products through indirect channels will reduce our consulting service revenues, as the third-party systems integrators generally provide these services. As indirect sales increase, our direct contact with our customer base will decrease, and we may have more difficulty accurately forecasting sales, evaluating customer satisfaction and recognizing emerging customer requirements. In addition, these systems integrators and third-party software providers may develop, acquire or market products competitive with our products. Our strategy of marketing our products directly to customers and indirectly through systems integrators and other technology companies may result in distribution channel conflicts. Our direct sales efforts may compete with those of our indirect channels and, to the extent that different systems integrators target the same customers, systems integrators may also come into conflict with each other. Any channel conflicts that develop may have a material adverse effect on our relationships with systems integrators or harm our ability to attract new systems integrators.

Increasingly we are required to defer recognition of license revenue for a significant period of time after entering into an agreement, which could negatively affect our results of operations.

We are required to delay recognizing license revenue for a significant period of time based on a variety of factors, including:

whether the license agreement includes cloud services such as managing the application and hosting the server that are performed over the term of the contract;

whether the license agreement relates to then-unavailable software products;

whether transactions include both currently deliverable software products and software products that are under development or other undeliverable elements;

whether the customer demands services that include significant modifications, customizations or complex interfaces that could delay product delivery or acceptance;

whether the transaction involves acceptance criteria that may preclude revenue recognition or if there are identified product-related issues, such as known defects; and

whether the transaction involves payment terms or fees that depend upon contingencies. These factors and other specific accounting requirements under U.S. generally accepted accounting principles (GAAP) for software revenue recognition require that we have very precise terms in our license agreements to allow us to recognize revenue when we initially deliver software or perform services. Although we have a standard form of license agreement that we believe meets the criteria under GAAP for current revenue recognition on delivered elements, we negotiate and revise these terms and conditions in many transactions. Therefore, we may license our software or provide services with terms and conditions that do not permit revenue recognition at the time of delivery or even as work on the project is completed.

We are dependent upon the retail industry for a significant portion of our revenues.

Historically, we have derived a significant percentage of our revenues from the license of software products and the sale of collaborative applications that address vertical market opportunities with manufacturers and wholesalers that supply retail customers. The success of our customers is directly linked to economic conditions in the retail industry, which in turn are subject to intense competitive pressures and are affected by overall economic conditions. In addition, we believe that the licensing of certain of our software products involves a large capital expenditure, which is often accompanied by large-scale hardware purchases or other capital commitments. As a result, demand for our products and services could decline in the event of instability or potential downturns in our customers' industries.

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We believe the retail industry remains relatively cautious in its level of investment in IT when compared to other industries. We remain concerned about weak and uncertain economic conditions, consolidations and the disappointing results of retailers in certain markets, especially if such weak economic conditions persist for an extended period of time. Weak and uncertain economic conditions have in the past, and may in the future, negatively affect our revenues, including potential deterioration of our maintenance revenue base as customers look to reduce their costs, elongation of our selling cycles, and reduction in the demand for our products. As a result, it is difficult in the current economic environment to predict exactly when specific software licenses will close. In addition, weak and uncertain economic conditions could impair our customers' ability to pay for our products or services. Any of these factors could adversely affect our business, our quarterly or annual operating results and our financial condition.

We have observed that as the retail industry consolidates it is experiencing increased competition in certain geographic regions that could negatively affect the industry and our customers' ability to pay for our products and services. Such consolidation has in the past, and may in the future, negatively impact our revenues and reduce the demand for our products, and may adversely affect our business, operating results and financial condition.

We may derive a significant portion of our revenues in any quarter from a limited number of large, non-recurring license sales.

We expect to continue to experience from time-to-time large, individual license sales, which may cause significant variations in quarterly license fees. We also believe that purchasing our products is relatively discretionary and generally involves a significant commitment of a customer's capital resources. Therefore, a downturn in any customer's business could result in order cancellations that could have a significant adverse impact on our revenues and quarterly results. Moreover, continued uncertainty about general economic conditions could precipitate significant reductions in corporate spending for IT, which could result in delays or cancellations of orders for our products.

Our lengthy sales cycle makes it difficult to predict quarterly revenue levels and operating results.

Because license and implementation fees for our software products are substantial and the decision to purchase our products typically involves members of our customers' senior management, the sales process for our solutions is lengthy. Accordingly, the timing of our license revenues is difficult to predict, and the delay of an order could cause our quarterly revenues to fall substantially below our expectations and those of public market analysts and investors. Moreover, to the extent that we succeed in shifting customer purchases away from individual software products and toward more costly integrated suites of software and services, our sales cycle may lengthen, which could increase the likelihood of delays and cause the effect of a delay to become more pronounced. Delays in sales could cause significant shortfalls in our revenues and operating results for any particular period. Also, it is difficult for us to forecast the timing and recognition of revenues from sales of our products because our existing and prospective customers often take significant time evaluating our products before licensing them. The period between initial customer contact and a purchase by a customer may vary from nine months to more than one year. During the evaluation period, prospective customers may decide not to purchase or may scale down proposed orders of our products for various reasons, including:

reduced demand for enterprise software solutions;

introduction of products by our competitors;

lower prices offered by our competitors;

changes in budgets and purchasing priorities; and

reduced need to upgrade existing systems.

Our existing and prospective customers routinely require education regarding the use and benefits of our products. This may also lead to delays in receiving customers' orders.

We derive a significant portion of our services revenues from a small number of customers. If these customers were to discontinue the usage of our services or delay their implementation our total revenues would be adversely affected.

We derive a significant portion of our services revenues, and total revenues, from a small number of customers using our services for product enhancement and other optional services. If these customers were to discontinue or delay the usage of these services, or obtain these services from a competitor, our services revenues and total revenues would be adversely affected. Customers may delay

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or terminate implementation of our services due to budgetary constraints related to economic uncertainty, dissatisfaction with product quality, the difficulty of prioritizing numerous IT projects, changes in business strategy, personnel or priorities, or for other reasons. Such customers may be less likely to invest in additional software in the future and to continue to pay for software maintenance. Since our business relies to a large extent upon sales to existing customers and since maintenance and services revenues are key elements of our revenue base, any reduction in these sales or these maintenance and services payments could have a material adverse effect on our business, results of operations, cash flows and financial condition.

Services revenues carry lower gross margins than license revenues and an overall increase in services revenues as a percentage of total revenues could have an adverse impact on our business.

Because our service revenues have lower gross margins than do our license revenues, an increase in the percentage of total revenues represented by service revenues or a change in the mix between services that are provided by our employees versus services provided by third-party consultants could have a detrimental impact on our overall gross margins and could adversely affect operating results.

If our customers elect not to renew maintenance contracts after the initial maintenance period and the loss of those customers is not offset by new maintenance customers, our maintenance revenues and total revenues would be adversely affected.

Upon the purchase of a software license, our customers typically enter into a maintenance contract with a term from approximately one to three years. If, after this initial maintenance period, customers elect not to renew their maintenance contracts and we do not offset the loss of those customers with new maintenance customers as a result of new license fees, our maintenance revenues and total revenues would be adversely affected.

If accounting interpretations relating to revenue recognition change or companies we acquire have applied such standards differently than we do or have not applied them at all, our reported revenues could decline or we could be forced to make changes in our business practices or we may incur the expense and risks associated with an audit or restatement of the acquired company's financial statements.

There are several accounting standards and interpretations covering revenue recognition for the software industry. These standards address software revenue recognition matters primarily from a conceptual level and do not include specific implementation guidance. We believe that we currently comply with these standards.

The accounting profession and regulatory agencies continue to discuss various provisions of these pronouncements with the objective of providing additional guidance on their application and with respect to potential interpretations. These discussions and the issuance of new interpretations could lead to unanticipated changes in our current revenue accounting practices, which could change the timing of recognized revenue. They could also drive significant adjustments to our business practices which could result in increased administrative costs, lengthened sales cycles and other changes which could adversely affect our reported revenues and results of operations. In addition, companies we acquire may have historically interpreted software revenue recognition rules differently than we do or may not have been subject to U.S. GAAP as a result of reporting under local GAAP in a foreign country. If we discover that companies we have acquired have interpreted and applied software revenue recognition rules differently than prescribed by U.S. GAAP, we could be required to devote significant management resources, and incur the expense associated with an audit, restatement or other examination of the acquired companies' financial statements.

Our future growth depends upon our ability to develop and sustain relationships with complementary vendors to market and implement our software products, and a failure to develop and sustain these relationships could

have a material adverse effect on our operating performance and financial condition.

We are developing, maintaining and enhancing significant working relationships with complementary vendors, such as software companies, consulting firms, resellers and others that we believe can play important roles in marketing our products and solutions. We are currently investing, and intend to continue to invest, significant resources to develop and enhance these relationships, which could adversely affect our operating margins. We may be unable to develop relationships with organizations that will be able to market our products effectively. Our arrangements with these organizations are not exclusive and, in many cases, may be terminated by either party without cause. Many of the organizations with which we are developing or maintaining marketing relationships have commercial relationships with our competitors. There can be no assurance that any organization will continue its involvement with us and our products. The loss of relationships with such organizations could materially and adversely affect our operating performance and financial condition.

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Failure to maintain our margins and service rates for implementation services could have a material adverse effect on our operating performance and financial condition.

A significant portion of our revenues is derived from implementation services. If we fail to scope our implementation projects correctly, our services margins may suffer. We bill for implementation services predominately on an hourly or daily basis (time and materials) and sometimes under fixed price contracts, and we generally recognize revenue from those services as we perform the work. If we are not able to maintain the current service rates for our time and materials implementation services, without corresponding cost reductions, or if the percentage of fixed price contracts increases and we underestimate the costs of our fixed price contracts, our operating performance may suffer. The rates we charge for our implementation services depend on a number of factors, including the following:

perceptions of our ability to add value through our implementation services;

complexity of services performed;

competition;

pricing policies of our competitors and of systems integrators;

the use of globally sourced, lower-cost service delivery capabilities within our industry; and

economic, political and market conditions.

Our past and future acquisitions may not be successful and we may have difficulty integrating acquisitions.

We continually evaluate potential acquisitions of complementary businesses, products and technologies. We have in the past acquired and invested, and may continue to acquire or invest, in complementary companies, products and technologies, and enter into joint ventures and strategic alliances with other companies. Acquisitions, joint ventures, strategic alliances, and investments present many risks, and we may not realize the financial and strategic goals that were contemplated at the time of any transaction. Risks commonly encountered in such transactions include:

the risk that an acquired company or assets may not further our business strategy or that we paid more than the company or assets were worth;

the difficulty of assimilating the operations and retaining and motivating personnel of an acquired company;

the risk that we may not be able to integrate acquired technologies or products with our current products and technologies;

the potential disruption of our ongoing business and the diversion of our management's attention from other business concerns;

the inability of management to maximize our financial and strategic position through the successful integration of an acquired company;

adverse impact on our annual effective tax rate;

dilution of existing equity holders caused by capital stock issuance to the shareholders of an acquired company or stock option grants to retain employees of an acquired company;

difficulty in maintaining controls, procedures and policies;

potential adverse impact on our relationships with partner companies or third-party providers of technology or products;

the impairment of relationships with employees and customers;

potential assumption of liabilities of our acquisition targets;

significant exit or impairment charges if products acquired in business combinations are unsuccessful; and

issues with product quality, product architecture, legal contingencies, product development issues, or other significant issues that may not be detected through our due diligence process.

Accounting rules require the use of the purchase method of accounting in all new business acquisitions. Many acquisition candidates have significant intangible assets, and an acquisition of these businesses would likely result in significant amounts of goodwill and other intangible assets. The purchase method of accounting for business combinations may require large write-offs of

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any in-process research and development costs related to companies being acquired, as well as ongoing amortization costs for other intangible assets valued in combinations of companies. Goodwill and certain other intangible assets are not amortized to income, but are subject to at least annual impairment reviews. If the acquisitions do not perform as planned, future write-offs and charges to income arising from such impairment reviews could be significant. In addition, these acquisitions could involve acquisition-related charges, such as one-time acquired research and development charges. Such write-offs and ongoing amortization charges may have a significant negative impact on operating margins and net earnings in the quarter of the combination and for several subsequent years. We may not be successful in overcoming these risks or any other problems encountered in connection with such transactions.

Our business may require additional capital.

We may require additional capital to finance our growth or to fund acquisitions or investments in complementary businesses, technologies or product lines. Our capital requirements may be influenced by many factors, including:

the demand for our products;

the timing and extent of our investment in new technology;

the timing and extent of our acquisition of other companies;

the level and timing of revenue;

the expenses of sales and marketing and new product development;

the success and related expense of increasing our brand awareness;

the cost of facilities to accommodate a growing workforce;

the extent to which competitors are successful in developing new products and increasing their market shares; and

the costs involved in maintaining and enforcing intellectual property rights.

To the extent that our resources are insufficient to fund our future activities, we may need to raise additional funds through public or private financing. However, additional funding, if needed, may not be available on terms attractive to us, or at all. Our inability to raise capital when needed could have a material adverse effect on our business, operating results and financial condition. If additional funds are raised through the issuance of equity securities, the percentage ownership of our company by our current shareholders would be diluted.

Business disruptions could affect our operating results.

A significant portion of our research and development activities and certain other critical business operations are concentrated in a few geographic areas. We are a highly automated business and a disruption or failure of our systems could cause delays in completing sales and providing services. A major earthquake, fire or other catastrophic event that results in the destruction or disruption of any of our critical business or IT systems could severely affect our ability to conduct normal business operations and, as a result, our future operating results could be materially and adversely affected.

Our international operations and sales subject us to risks associated with unexpected activities outside of the United States.

The global reach of our business could cause us to be subject to unexpected, uncontrollable and rapidly changing events and circumstances in addition to those experienced in locations within the United States. As we grow our international operations, we may need to recruit and hire new consulting, product development, sales and marketing and support personnel in the countries in which we have or will establish offices. Entry into new international markets typically requires the establishment of new marketing and distribution channels, as well as the development and subsequent support of localized versions of our software. International introductions of our products often require a significant investment in advance of anticipated future revenues. In addition, the opening of a new office typically results in initial recruiting and training expenses and reduced labor efficiencies associated with the introduction of products to a new market. If we are less successful in a new market than we expect, we may not be able to realize an adequate return on our initial investment and our operating results could suffer. We cannot guarantee that the countries in which we operate will have a sufficient pool of qualified personnel from which to hire, that we will be successful at hiring, training or retaining such personnel or that we can expand or contract our international operations in a timely, cost-effective manner. If we have to downsize certain international operations, particularly in Europe, the costs to do so are typically much higher than downsizing costs in the United States. The following factors, among others, could have an adverse impact on our business and earnings:

failure to properly comply with foreign laws and regulations applicable to our foreign activities including, without limitation, software localization requirements;

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failure to properly comply with U.S. laws and regulations relating to the export of our products and services;

compliance with multiple and potentially conflicting regulations in Europe, Asia and North America, including export requirements, tariffs, import duties and other trade barriers, as well as health and safety requirements;

difficulties in managing foreign operations and appropriate levels of staffing;

longer collection cycles;

tariffs and other trade barriers;

seasonal reductions in business activities, particularly throughout Europe;

reduced protection for intellectual property rights in some countries;

proper compliance with local tax laws which can be complex and may result in unintended adverse tax consequences;

anti-American sentiment due to conflicts in the Middle East and other American policies that may be unpopular in certain countries;

increasing political instability, adverse economic conditions and the potential for war or other hostilities in many of these countries;

difficulties in enforcing agreements through foreign legal systems;

fluctuations in exchange rates that may affect product demand and may adversely affect the profitability in U.S. dollars of products and services provided by us in foreign markets where payment for our products and services is made in the local currency, including any fluctuations caused by uncertainties relating to the June 2016 referendum vote by the United Kingdom to exit the European Union (Brexit);

changes in general economic and political conditions in countries where we operate;

the impact of Brexit on the United Kingdom's access to the European Union Single Market, the related regulatory environment, the global economy and the resulting impact on our business, including the delay of execution of contracts by our customers;

potential labor strikes, lockouts, work slowdowns and work stoppages; and

restrictions on downsizing operations in Europe and expenses and delays associated with any such activities.

It may become increasingly expensive to obtain and maintain liability insurance.

Our products are often critical to the operations of our customers' businesses and provide benefits that may be difficult to quantify. If our products fail to function as required, we may be subject to claims for substantial damages. Courts may not enforce provisions in our contracts that would limit our liability or otherwise protect us from liability for damages. Although we maintain general liability insurance coverage, including coverage for errors or omissions, this coverage may not continue to be available on reasonable terms or in sufficient amounts to cover claims against us. In addition, our insurer may disclaim coverage as to any future claim. If claims exceeding the available insurance coverage are successfully asserted against us, or our insurer imposes premium increases, large deductibles or co-insurance requirements on us, our business and results of operations could be adversely affected.

We contract for insurance to cover a variety of potential risks and liabilities, including those relating to the unexpected failure of our products. In the current market, insurance coverage for all types of risk is becoming more restrictive, and when insurance coverage is offered, the deductible for which we are responsible is larger. In light of these circumstances, it may become more difficult to maintain insurance coverage at historical levels or, if such coverage is available, the cost to obtain or maintain it may increase substantially. This may result in our being forced to bear the burden of an increased portion of risks for which we have traditionally been covered by insurance, which could negatively impact our results of operations.

Adverse litigation results could affect our business.

We may be subject to various legal proceedings and claims involving customer, shareholder, consumer, competition and other issues on a global basis. Litigation can be lengthy, expensive and disruptive to our operations, and results cannot be predicted with certainty. An adverse decision could result in monetary damages or injunctive relief that could affect our business, operating results or financial condition.

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Growth in our operations could increase demands on our managerial and operational resources.

If the scope of our operating and financial systems and the geographic distribution of our operations and customers increase dramatically, this may increase demands on our management and operations. Our officers and other key employees will need to implement and improve our operational, customer support and financial control systems and effectively expand, train and manage our employee base.

Further, we may be required to manage an increasing number of relationships with various customers and other third parties. We may not be able to manage future expansion successfully, and our inability to do so could harm our business, operating results and financial condition.

Changes in U.S. tax laws could have a material adverse effect on our business, cash flow, results of operations or financial condition.

The Tax Cuts and Jobs Act (the U.S. Tax Act), enacted on December 22, 2017, represents a significant overhaul to the U.S. federal tax code. This tax legislation lowers the U.S. statutory tax rate from 35% to 21%, but also includes a number of provisions that could impact our U.S. federal income tax position in a reporting period, including the limitation or elimination of certain deductions or credits, and U.S. taxes on foreign earnings. In addition, any further changes to tax laws could adversely affect our effective tax rates, cause us to change the way in which we structure our business or result in other costs.

RISK FACTORS RELATED TO OUR PRODUCTS

We may not be successful in convincing customers to migrate to current or future releases of our products, which may lead to reduced services and maintenance revenues and less future business from existing customers.

Our customers may not be willing to incur the costs or invest the resources necessary to complete upgrades to current or future releases of our products. This may lead to our loss of services and maintenance revenues and future business from customers that continue to operate prior versions of our products or choose to no longer use our products.

We depend on third-party technology which, if it should become unavailable or if it contains defects, could result in increased costs or delays in the production and improvement of our products.

We license critical third-party software products that we incorporate into our own software products. We are likely to incorporate and include additional third-party software into and with our products and solutions as we expand our product offerings. The operation of our products would be impaired if errors occur in the third-party software that we utilize. It may be more difficult for us to correct any defects in third-party software because the software is not within our control. Accordingly, our business could be adversely affected in the event of any errors in this software. There can be no assurance that these third parties will continue to make their software available to us on acceptable terms, invest the appropriate levels of resources in their products and services to maintain and enhance the capabilities of their software, or even remain in business. Further, due to the limited number of vendors of certain types of third-party software, it may be difficult for us to replace such third-party software if a vendor terminates our license of the software or our ability to license the software to customers. If our relations with any of these third-party software providers are impaired, and if we are unable to obtain or develop a replacement for the software, our business could be harmed. In addition, if the cost of licensing any of these third-party software products significantly increases, our gross margin levels could significantly decrease.

The use of open source software in our products may expose us to additional risks and harm our intellectual property.

Some of our products use or incorporate software that is subject to one or more open source licenses. Open source software is typically freely accessible, usable and modifiable. Certain open source software licenses require a user who intends to distribute the open source software as a component of the user's software to disclose publicly part or all of the source code to the user's software. In addition, certain open source software licenses require the user of such software to make any derivative works of the open source code available to others on unfavorable terms or at no cost. This can subject previously proprietary software to open source license terms.

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While we monitor the use of all open source software in our products, processes and technology and try to ensure that no open source software is used in such a way as to require us to disclose the source code to the related product or solution, such use could inadvertently occur. Additionally, if a third-party software provider has incorporated certain types of open source software into software we license from such third party for our products and solutions, we could, under certain circumstances, be required to disclose the source code to our products and solutions. This could harm our intellectual property position and have a material adverse effect on our business, results of operations, cash flow and financial condition.

We may be unable to retain or attract customers if we do not develop new products and enhance our current products in response to technological changes and competing products.

As a software company, we have been required to migrate our products and services from mainframe to customer server to web-based environments. In addition, we have been required to adapt our products to emerging standards for operating systems, databases and other technologies. We will be unable to compete effectively if we are unable to:

maintain and enhance our technological capabilities to correspond to these emerging environments and standards;

develop and market products and services that meet changing customer needs; or

anticipate or respond to technological changes on a cost-effective and timely basis.

A substantial portion of our research and development resources is devoted to product upgrades that address regulatory and support requirements. Only the remainder of our limited research and development resources is available for new products. New products require significant development investment. That investment is further constrained because of the added costs of developing new products that work with multiple operating systems or databases. We face uncertainty when we develop or acquire new products because there is no assurance that a sufficient market will develop for those products. If we do not attract sufficient customer interest in those products, we will not realize a return on our investment and our operating results will be adversely affected.

Our core products face competition from new or modified technologies that may render our existing technology less competitive or obsolete, reducing the demand for our products. As a result, we must continually redesign our products to incorporate these new technologies and to adapt our software products to operate on, and comply with evolving industry standards for, hardware and software platforms. Maintaining and upgrading our products to operate on multiple hardware and database platforms reduces our resources for developing new products. Because of the increased costs of developing and supporting software products across multiple platforms, we may need to reduce the number of those platforms. In addition, conflicting new technologies present us with difficult choices of which new technologies to adopt. If we fail to anticipate the most popular platforms, fail to respond adequately to technological developments, or experience significant delays in product development or introduction, our business and operating results will be negatively impacted.

In addition, to the extent we determine that new technologies and equipment are required to remain competitive, the development, acquisition and implementation of such technologies may require us to make significant capital investments. We may not be able to obtain capital for these purposes and investments in new technologies may not result in commercially viable products. The loss of revenue and increased costs to us from such changing technologies

would adversely affect our business and operating results.

If our products are not able to deliver quick, demonstrable value to our customers, our business could be seriously harmed.

Enterprises are requiring their application software vendors to provide faster returns on their technology investments. We must continue to improve our speed of implementation and the pace at which our products deliver value or our competitors may gain important strategic advantages over us. If we cannot successfully respond to these market demands, or if our competitors respond more successfully than we do, our business, results of operations and financial condition could be materially and adversely affected.

If we do not maintain software performance across accepted platforms and operating environments, our license and services revenue could be adversely affected.

The markets for our software products are characterized by rapid technological change, evolving industry standards, changes in customer requirements and frequent new product introductions and enhancements. We continuously evaluate new technologies and implement advanced technology into our products. However, if in our product development efforts we fail to accurately address, in a timely manner, evolving industry standards, new technology advancements or important third-party interfaces or product architectures, sales of our products and services will suffer.

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Market acceptance of new platforms and operating environments may require us to undergo the expense of developing and maintaining compatible product lines. We can license our software products for use with a variety of popular industry standard relational database management system platforms using different programming languages and underlying databases and architectures. There may be future or existing relational database platforms that achieve popularity in the marketplace and that may or may not be architecturally compatible with our software product design. In addition, the effort and expense of developing, testing, and maintaining software product lines will increase as more hardware platforms and operating systems achieve market acceptance within our target markets. Moreover, future or existing user interfaces that achieve popularity within the business application marketplace may or may not be architecturally compatible with our current software product design. If we do not achieve market acceptance of new user interfaces that we support, or adapt to popular new user interfaces that we do not support, our sales and revenue may be adversely affected. Developing and maintaining consistent software product performance characteristics across all of these combinations could place a significant strain on our resources and software product release schedules, which could adversely affect revenues and results of operations.

Our software products and product development are complex, which make it increasingly difficult to innovate, extend our product offerings, and avoid costs related to correction of program errors.

The market for our software products is characterized by rapid technological change, evolving industry standards, changes in customer requirements and frequent new product introductions and enhancements. For instance, existing products can become obsolete and unmarketable when vendors introduce products utilizing new technologies or new industry standards emerge. As a result, it is difficult for us to estimate the life cycles of our software products. There can be no assurance that we will successfully identify new product opportunities or develop and bring new products to the market in a timely and cost-effective manner, or that products, capabilities or technologies developed by our competitors will not render our products obsolete. Our future success will depend in part upon our ability to:

continue to enhance and expand our core applications;

continue to sell our products;

continue to successfully integrate third-party products;

enter new markets and achieve market acceptance; and

develop and introduce new products that keep pace with technological developments, including developments related to the Internet, satisfy increasingly sophisticated customer requirements and achieve market acceptance.

Despite testing by us, our software programs, like all software programs generally, may contain a number of undetected errors or bugs when we first introduce them or as new versions are released. We do not discover some errors until we have installed the product and our customers have used it. Errors may result in the delay or loss of revenues, diversion of software engineering resources, material non-monetary concessions, negative media attention, or increased service or warranty costs as a result of performance or warranty claims that could lead to customer dissatisfaction, resulting in litigation, damage to our reputation, and impaired demand for our products. Correcting

bugs may result in increased costs and reduced acceptance of our software products in the marketplace. Further, such errors could subject us to claims from our customers for significant damages, and we cannot assure you that courts would enforce the provisions in our customer agreements that limit our liability for damages. The effort and expense of developing, testing and maintaining software product lines will increase with the increasing number of possible combinations of:

vendor hardware platforms;

operating systems and updated versions;

application software products and updated versions; and

database management system platforms and updated versions.

Developing consistent software product performance characteristics across all of these combinations could place a significant strain on our development resources and software product release schedules.

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If the open source community expands into enterprise application and supply chain software, our license fee revenues may decline.

The open source community is comprised of many different formal and informal groups of software developers and individuals who have created a wide variety of software and have made that software available for use, distribution and modification, often free of charge. Open source software, such as the Linux operating system, has been gaining in popularity among business users. If developers contribute enterprise and supply chain application software to the open source community, and that software has competitive features and scale to support business users in our markets, we will need to change our product pricing and distribution strategy to compete successfully.

Implementation of our products can be complex, time-consuming and expensive, customers may be unable to implement our products successfully, and we may become subject to warranty or product liability claims, which could be costly to resolve and result in negative publicity.

Our products must integrate with the many existing computer systems and software programs of our customers. This can be complex, time-consuming and expensive, and may cause delays in the deployment of our products. Our customers may be unable to implement our products successfully or otherwise achieve the benefits attributable to our products. Although we test each of our new products and product enhancement releases and evaluate and test the products we obtain through acquisitions before introducing them to the market, there may still be significant errors in existing or future releases of our software products, with the possible result that we may be required to expend significant resources in order to correct such errors or otherwise satisfy customer demands. In addition, defects in our products or difficulty integrating our products with our customers' systems could result in delayed or lost revenues, warranty or other claims against us by customers or third parties, adverse customer reactions and negative publicity about us or our products and services or reduced acceptance of our products and services in the marketplace, any of which could have a material adverse effect on our reputation, business, results of operations and financial condition.

An increase in sales of software products that require customization would result in revenue being recognized over the term of the contract for those products and could have a material adverse effect on our operating performance and financial condition.

Historically, we generally have been able to recognize software license revenue upon delivery of our solutions and contract execution. Customers and prospects could ask for unique capabilities in addition to our core capabilities to give them a competitive edge in the market place. These instances could cause us to recognize more of our software license revenue on a contract accounting basis over the course of the delivery of the solution rather than upon delivery and contract execution. The period between the initial contract and the completion of the implementation of our products can be lengthy and is subject to a number of factors (over many of which we have little or no control) that may cause significant delays. These factors include the size and complexity of the overall project. As a result, a shift toward a higher proportion of software license contracts requiring contract accounting would have a material adverse effect on our operating performance and financial condition and cause our operating results to vary significantly from quarter to quarter.

We sometimes experience delays in product releases, which can adversely affect our business.

Historically, we have issued significant new releases of our software products periodically, with minor interim releases issued more frequently. As a result of the complexities inherent in our software, major new product enhancements and new products often require long development and testing periods before they are released. On occasion, we have experienced delays in the scheduled release dates of new or enhanced products, and we cannot provide any assurance that we will achieve future scheduled release dates. The delay of product releases or

enhancements, or the failure of such products or enhancements to achieve market acceptance, could materially affect our business and reputation.

We may not receive significant revenues from our current research and development efforts for several years.

Developing and localizing software is expensive, and the investment in product development may involve a long payback cycle. Our future plans include significant investments in software research and development and related product opportunities. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain our competitive position. However, we do not expect to receive significant revenues from these investments for several years, if at all.

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We have limited protection of our intellectual property and proprietary rights and may potentially infringe third-party intellectual property rights.

We consider certain aspects of our internal operations, software and documentation to be proprietary, and rely on a combination of copyright, trademark and trade secret laws; confidentiality agreements with employees and third parties; and protective contractual provisions (such as those contained in our license agreements with consultants, vendors, partners and customers) and other measures to protect this information. Existing copyright laws afford only limited protection. We believe that the rapid pace of technological change in the computer software industry has made trade secret and copyright protection less significant than factors such as:

knowledge, ability and experience of our employees;

frequent software product enhancements;

customer education; and

timeliness and quality of support services.

Our competitors may independently develop technologies that are substantially equivalent or superior to our technology. The laws of some countries in which our software products are or may be licensed do not protect our software products and intellectual property rights to the same extent as the laws of the United States.

We generally enter into confidentiality or license agreements with our employees, customers, consultants, and vendors. These agreements control access to and distribution of our software, documentation, and other proprietary information. Despite our efforts to protect our proprietary rights, unauthorized parties may copy aspects of our products, obtain and use information that we regard as proprietary, or develop similar technology through reverse engineering or other means. Preventing or detecting unauthorized use of our products is difficult. There can be no assurance that the steps we take will prevent misappropriation of our technology or that our license agreements will be enforceable. In addition, we may resort to litigation to enforce our intellectual property rights, protect our trade secrets, determine the validity and scope of others' proprietary rights, or defend against claims of infringement or invalidity in the future. Such litigation could result in significant costs or the diversion of resources. This could materially and adversely affect our business, operating results and financial condition.

Third parties may assert infringement claims against us. Although we do not believe that our products infringe on the proprietary rights of third parties, we cannot guarantee that third parties will not assert or prosecute infringement or invalidity claims against us. These assertions could distract management, require us to enter into royalty arrangements, and result in costly and time-consuming litigation, including damage awards. Such assertions or the defense of such claims may materially and adversely affect our business, operating results, or financial condition. In addition, such assertions could result in injunctions against us. Injunctions that prevent us from distributing our products would have a material adverse effect on our business, operating results, and financial condition. If third parties assert such claims against us, we may seek to obtain a license to use such intellectual property rights. There can be no assurance that such a license would be available on commercially reasonable terms. If a patent claim against us were successful and we could not obtain a license on acceptable terms or license a substitute technology or redesign to avoid infringement, we may be prevented from distributing our software or required to incur significant expense

and delay in developing non-infringing software.

We may experience liability claims arising out of the licensing of our software and provision of services.

Our agreements normally contain provisions designed to limit our exposure to potential liability claims and generally exclude consequential and other forms of extraordinary damages. However, these provisions could be rendered ineffective, invalid or unenforceable by unfavorable judicial decisions or by federal, state, local or foreign laws or ordinances. For example, we may not be able to avoid or limit liability for disputes relating to product performance or the provision of services. If a claim against us were to be successful, we may be required to incur significant expense and pay substantial damages, including consequential or punitive damages, which could have a material adverse effect on our business, operating results and financial condition. Even if we prevail in contesting such a claim, the accompanying publicity could adversely affect the demand for our products and services.

We also rely on certain technology that we license from third parties, including software that is integrated with our internally developed software. Although these third parties generally indemnify us against claims that their technology infringes on the proprietary rights of others, such indemnification is not always available for all types of intellectual property. Often such third-party indemnifiers are not well capitalized and may not be able to indemnify us in the event that their technology infringes on the proprietary rights of others. As a result, we may face substantial exposure if technology we license from a third party infringes on another party's proprietary rights. Defending such infringement claims, regardless of their validity, could result in significant cost and diversion of resources.

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Concerns that our products do not adequately protect the privacy of consumers could inhibit sales of our products.

One of the features of our software applications is the ability to develop and maintain profiles of customers for use by businesses. Typically, these products capture profile information when customers and employees visit an Internet web site and volunteer information in response to survey questions concerning their backgrounds, interests and preferences. Our products augment these profiles over time by collecting usage data. Although we have designed our products to operate with applications that protect user privacy, privacy concerns may nevertheless cause visitors to resist providing the personal data necessary to support this profiling capability. If we cannot adequately address customers' privacy concerns, these concerns could materially and adversely harm our business, financial condition and operating results.

We face risks associated with the security of our products, and if our data protection or other security measures are compromised and as a result our data, our customers' data or our IT systems are accessed improperly, made unavailable, or improperly modified, our products and services may be perceived as vulnerable, our brand and reputation could be damaged, the IT services we provide to our customers could be disrupted, and customers may stop using our products and services, all of which could reduce our revenue and earnings, increase our expenses and expose us to legal claims and regulatory actions.

Maintaining the security of computers and computer networks is an issue of critical importance for our customers. Attempts by experienced computer programmers, or hackers, to penetrate client network security or the security of web sites to misappropriate confidential information have become an industry-wide phenomenon that affects computers and networks across all platforms. We have included security features in certain of our Internet browser-enabled products that are intended to protect the privacy and integrity of customer data. In addition, some of our software applications use encryption technology to provide the security necessary to affect the secure exchange of valuable and confidential information. Despite these security features, our products may be vulnerable to break-ins and similar problems caused by hackers, which could jeopardize the security of information stored in and transmitted through the computer systems of our customers. Actual or perceived security vulnerabilities in our products (or the Internet in general) could lead some customers to seek to reduce or delay future purchases or to purchase competitors' products which are not Internet-based applications. Customers may also increase their spending to protect their computer networks from attack, which could delay adoption of new technologies. Any of these actions by customers and the cost of addressing such security problems may have a material adverse effect on our business.

Although our license agreements with our customers contain provisions designed to limit our exposure as a result of the situations listed above, such provisions may not be effective. Existing or future federal, state, or local laws or ordinances or unfavorable judicial decisions could affect their enforceability. To date, we have not experienced any such product liability claims, but there can be no assurance that this will not occur in the future. Because our products are used in essential business applications, a successful product liability claim could have a material adverse effect on our business, operating results, and financial condition. Additionally, defending such a suit, regardless of its merits, could entail substantial expense and require the time and attention of key management.

Privacy and security concerns, including evolving government regulation in the area of consumer data privacy, could adversely affect our business and operating results.

Governments in some jurisdictions have enacted or are considering enacting consumer data privacy legislation, including laws and regulations applying to the solicitation, collection, processing and use of consumer data. For example, in 2016, the European Union adopted a new law governing data practices and privacy called the General Data Protection Regulation (GDPR), which became effective in May 2018. The law establishes new requirements

regarding the handling of personal data. Non-compliance with the GDPR may result in monetary penalties of up to 4% of worldwide revenue. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of sensitive data could greatly increase our cost of providing our products and services or even prevent us from offering certain services in jurisdictions that we operate. Additionally, public perception and standards related to the privacy of personal information can shift rapidly, in ways that may affect our reputation or influence regulators to enact regulations and laws that may limit our ability to provide certain products. U.S. federal, state, or foreign laws and regulations, including laws and regulations regulating privacy, data security, or consumer protection, or other policies, public perception, standards, self-regulatory requirements or legal obligations could reduce the demand for our software products if we fail to design or enhance our products to enable our customers to comply with the privacy and security measures required by these requirements. Moreover, we may be exposed to liability under existing or new consumer data privacy legislation. Even technical violations of these laws can result in penalties that are assessed for each non-compliant transaction. If we or our customers were found to be subject to and in violation of any of these laws or other data privacy laws or regulations, our business could suffer and we and/or our customers would likely have to change our business practices.

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We might experience significant errors or security flaws in our software products and services.

Despite testing prior to their release, software products frequently contain errors or security flaws, especially when first introduced or when new versions are released. The detection and correction of any security flaws can be time-consuming and costly. Errors in our software products could affect the ability of our products to work with other hardware or software products, could delay the development or release of new products or new versions of products and could adversely affect market acceptance of our products. If we experience errors or delays in releasing new software products or new versions of software products, we could lose revenues. In addition, there could be security issues with our products and networks and any security flaws, if exploited, could affect our ability to conduct internal business operations. End users, who rely on our software products and services for applications that are critical to their businesses, may have a greater sensitivity to product errors and security vulnerabilities than customers for software products generally. Software product errors and security flaws in our products or services could expose us to product liability, performance and/or warranty claims as well as harm our reputation, which could impact our future sales of products and services. In addition, we may be legally required to publicly report security breaches, which could adversely impact future business prospects for our products and services.

RISK FACTORS RELATED TO OUR PERSONNEL

We are dependent upon key personnel, and need to attract and retain highly qualified personnel in all areas.

Our future operating results depend significantly upon the continued service of a relatively small number of key senior management and technical personnel, including our President, H. Allan Dow. None of our key personnel are bound by long-term employment agreements. We do not have in place key person life insurance policies on any of our employees. If we fail to retain senior management or other key personnel, or fail to attract key personnel, our succession planning and operations could be materially and adversely affected and could jeopardize our ability to meet our business goals.

Our future success also depends on our continuing ability to attract, train, retain and motivate other highly qualified managerial and technical personnel. Competition for these personnel is intense, and we have at times experienced difficulty in recruiting and retaining qualified personnel, including sales and marketing representatives, qualified software engineers involved in ongoing product development, and personnel who assist in the implementation of our products and provide other services. The market for such individuals is competitive. For example, it has been particularly difficult to attract and retain product development personnel experienced in object oriented development technologies. Given the critical roles of our sales, product development and consulting staffs, our inability to recruit successfully or any significant loss of key personnel would adversely affect us. A high level of employee mobility and aggressive recruiting of skilled personnel characterizes the software industry. It may be particularly difficult to retain or compete for skilled personnel against larger, better-known software companies. We cannot guarantee that we will be able to retain our current personnel, attract and retain other highly qualified technical and managerial personnel in the future, or assimilate the employees from any acquired businesses. We will continue to adjust the size and composition of our workforce to match the different product and geographic demand cycles. If we are unable to attract and retain the necessary technical and managerial personnel, or assimilate the employees from any acquired businesses, our business, operating results and financial condition would be adversely affected.

The failure to attract, train, retain and effectively manage employees could negatively impact our development and sales efforts and cause a degradation of our customer service. In particular, the loss of sales personnel could lead to lost sales opportunities because it can take several months to hire and train replacement sales personnel. If our competitors increase their use of non-compete agreements, the pool of available sales and technical personnel may further narrow in certain areas, even if the non-compete agreements ultimately prove to be unenforceable. We may

grant large numbers of stock options to attract and retain personnel, which could be highly dilutive to our shareholders. The volatility or lack of positive performance of our stock price may adversely affect our ability to retain or attract employees. The loss of key management and technical personnel or the inability to attract and retain additional qualified personnel could have an adverse effect on us.

We periodically have restructured our sales force, which can be disruptive.

We continue to rely heavily on our direct sales force. Periodically, we have restructured or made other adjustments to our sales force in response to factors such as product changes, geographical coverage and other internal considerations. Change in the structures of the sales force and sales force management can result in temporary lack of focus and reduced productivity that may affect revenues in one or more quarters. Future restructuring of our sales force could occur, and if so we may again experience the adverse transition issues associated with such restructuring.

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Our technical personnel have unique access to customer data, and may abuse that privilege.

Of necessity for the proper rendering of the services we provide, our technical personnel have the ability to access data on the systems run by our customers or hosted by us for our customers. This would include data about the operations of our customers and even about the customers of our customers. Although we have never had such an occurrence in the entire history of our Company, it is conceivable that such access could be abused in order to improperly utilize that data to the detriment of such customers.

RISK FACTORS RELATED TO OUR CORPORATE STRUCTURE AND GOVERNANCE

Our business is subject to changing regulation of corporate governance and public disclosure that has increased both our costs and the risk of noncompliance.

Because our common stock is publicly traded, we are subject to certain rules and regulations of federal, state and financial market exchange entities charged with the protection of investors and the oversight of companies whose securities are publicly traded. These entities, including the Public Company Accounting Oversight Board, the Securities and Exchange Commission and NASDAQ, have issued new requirements and regulations and continue to develop additional regulations and requirements in response to laws enacted recently by Congress, most notably the Sarbanes-Oxley Act of 2002. Our efforts to comply with these new regulations have resulted in, and are likely to continue to result in, increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities.

In particular, our efforts to comply with Section 404 of the Sarbanes-Oxley Act of 2002 and the related regulations regarding our required assessment of our internal control over financial reporting and our independent public accounting firm's audit of that assessment have required, and continue to require, the commitment of significant financial and managerial resources. Moreover, because these laws, regulations and standards are subject to varying interpretations, their application in practice may evolve over time as new guidance becomes available. This evolution may result in continuing uncertainty regarding compliance matters and additional costs necessitated by ongoing revisions to our disclosure and governance practices. Over time, we have made significant changes in, and may consider making additional changes to, our internal controls, our disclosure controls and procedures, and our corporate governance policies and procedures. Any system of controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, and not absolute, assurances that the objectives of the system are met. Any failure of our controls, policies and procedures could have a material adverse effect on our business, results of operations, cash flow and financial condition.

If in the future we are unable to assert that our internal control over financial reporting is effective as of the end of the then current fiscal year (or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal control over financial reporting), we could lose investor confidence in the accuracy and completeness of our financial reports, which would have a negative market reaction.

One stockholder beneficially owns a substantial portion of our stock, and as a result exerts substantial control over us.

As of June 30, 2018, James C. Edenfield, Executive Chairman, Treasurer and a Director of the Company, beneficially owned 1,821,587 shares, or 96.58%, of our Class B common stock, and 210,000 shares, or 0.72%, of our Class A common stock. If all of Mr. Edenfield's Class B shares were converted into Class A shares, Mr. Edenfield would beneficially own 2,031,587 Class A shares, which would represent approximately 6.57% of all outstanding Class A shares after giving effect to such conversion. As a result of Mr. Edenfield's ownership of Class B common stock, he

has the right to elect a majority of our Board of Directors. Moreover, Mr. Edenfield and a member of his immediate family constitute two of the six members of the Board, and thus have significant influence in directing the actions of the Board of Directors. Such control and concentration of ownership may discourage a potential acquirer from making a purchase offer that other shareholders might find favorable, which in turn could adversely affect the market price of our common stock.

Our articles of incorporation and bylaws and Georgia law may inhibit a takeover of our company.

Our basic corporate documents and Georgia law contain provisions that might enable our management to resist a takeover. These provisions might discourage, delay or prevent a change in the control or a change in our management. These provisions could also discourage proxy contests and make it more difficult for you and other shareholders to elect directors and take other corporate actions. The existence of these provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock.

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We are a controlled company within the meaning of NASDAQ rules and, as a result, qualify for, and rely on, exemptions from certain corporate governance requirements.

Because Mr. Edenfield has the ability to elect more than half of the members of our Board of Directors, we are a controlled company within the meaning of the rules governing companies with stock quoted on the NASDAQ Global Select Market. Under these rules, a controlled company is a company of which more than 50% of the voting power for the election of directors is held by an individual, a group or another company. As a controlled company, we are exempt from certain corporate governance requirements, including requirements that: (1) a majority of the board of directors consist of independent directors; (2) compensation of officers be determined or recommended to the board of directors by a majority of its independent directors or by a compensation committee that is composed entirely of independent directors; and (3) director nominees be selected or recommended for selection by a majority of the independent directors or by a nominating committee composed solely of independent directors. Our Board of Directors does not have a majority of independent directors, and our compensation committee is not required to consist entirely of independent directors. We are not required to have, and have not chosen to establish, a nominating committee. Accordingly, our procedures for approving significant corporate decisions are not subject to the same corporate governance requirements as non-controlled companies with stock quoted on the NASDAQ Global Select Market.

RISK FACTORS RELATED TO OUR STOCK PRICE

We could experience fluctuations in quarterly operating results that could adversely affect our stock price.

We have difficulty predicting our actual quarterly operating results, which have varied widely in the past and which we expect to continue to vary in the future. We expect they will continue to vary significantly from quarter to quarter due to a number of factors, many of which are outside our control. We base our expense levels, operating costs and hiring plans on projections of future revenues, and it is difficult for us to rapidly adjust when actual results do not match our projections. If our quarterly revenue or operating results fall below the expectations of investors or public market analysts, the price of our common stock could fall substantially. License revenues in any quarter depend substantially on the combined contracting activity of the American Software group of companies and our ability to recognize revenues in that quarter in accordance with our revenue recognition policies. Our contracting activity is difficult to forecast for a variety of reasons, including the following:

we complete a significant portion of our license agreements within the last few weeks of each quarter;

whether the license agreement includes cloud services such as managing the application and hosting the server that are performed over the term of the contract that then require all the revenue to be spread over the term of the contract;

our sales cycle for products and services, including multiple levels of authorization required by some customers, is relatively long and variable because of the complex and mission-critical nature of our products;

the demand for our products and services can vary significantly;

the size of our license transactions can vary significantly;

the possibility of adverse global political conditions and economic downturns, both domestic and international, characterized by decreased product demand, price erosion, technological shifts, work slowdowns and layoffs, may substantially reduce customer demand and contracting activity;

customers may unexpectedly postpone or cancel anticipated system replacement or new system evaluation and implementation due to changes in their strategic priorities, project objectives, budgetary constraints, internal purchasing processes or company management;

customer evaluations and purchasing processes vary from company to company, and a customer's internal approval and expenditure authorization process can be difficult and time-consuming, even after selection of a vendor; and

the number, timing and significance of software product enhancements and new software product announcements by us and by our competitors may affect purchase decisions.

Variances or slowdowns in our licensing activity in prior quarters may affect current and future consulting, training and maintenance revenues, since these revenues typically follow license fee revenues. Our ability to maintain or increase services revenues primarily depends on our ability to increase the number and size of our licensing agreements. In addition, we base our budgeted operating costs and hiring plans primarily on our projections of future revenues. Because most of our expense levels are relatively fixed, including employee compensation and rent in the near term, if our actual revenues fall below projections in any

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particular quarter, our business, operating results, and financial condition could be materially and adversely affected. In addition, our expense levels are based, in part, on our expectations regarding future revenue increases. As a result, any shortfall in revenue in relation to our expectations could cause significant changes in our operating results from quarter to quarter and could result in quarterly losses. As a result of these factors, we believe that period-to-period comparisons of our revenue levels and operating results are not necessarily meaningful. As a result, predictions of our future performance should not be based solely on our historical quarterly revenue and operating results.

Our stock price is volatile and there is a risk of litigation.

The trading price of our common stock has been in the past and may in the future be subject to wide fluctuations in response to factors such as the following:

general market conditions;

revenue or results of operations in any quarter failing to meet the expectations, published or otherwise, of the investment community;

customer order deferrals resulting from the anticipation of new products, economic uncertainty, disappointing operating results by the customer, management changes, corporate reorganizations or otherwise;

reduced investor confidence in equity markets, due in part to corporate collapses in recent years;

speculation in the press or analyst community;

wide fluctuations in stock prices, particularly with respect to the stock prices for other technology companies;

announcements of technological innovations by us or our competitors;

new products or the acquisition or loss of significant customers by us or our competitors;

developments with respect to our copyrights or other proprietary rights or those of our competitors;

changes in interest rates;

changes in investors' beliefs as to the appropriate price-earnings ratios for us and our competitors;

changes in recommendations or financial estimates by securities analysts who track our common stock or the stock of other software companies;

changes in management;

sales of common stock by our controlling shareholders, directors and executive officers;

rumors or dissemination of false or misleading information, particularly through Internet chat rooms, instant messaging, and other rapid-dissemination methods;

conditions and trends in the software industry generally;

the announcement of acquisitions or other significant transactions by us or our competitors;

adoption of new accounting standards affecting the software industry;

domestic or international terrorism and other factors; and

the other factors described in these Risk Factors.

Fluctuations in the price of our common stock may expose us to the risk of securities class action lawsuits. Although no such lawsuits are currently pending against us and we are not aware that any such lawsuit is threatened to be filed in the future, there is no assurance that we will not be sued based on fluctuations in the price of our common stock. Defending against such lawsuits could result in substantial cost and divert management's attention and resources. In addition, any settlement or adverse determination of these lawsuits could subject us to significant liabilities.

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Our dividend policy is subject to change.

On May 16, 2018, our Board of Directors declared quarterly dividends of \$0.11 per share, payable to our Class A and Class B common stockholders. We currently expect to declare and pay cash dividends at this level on a quarterly basis in the future. However, our dividend policy may be affected by, among other things, our views on business conditions, our financial position, earnings, earnings outlook, capital spending plans and other factors that our Board of Directors considers relevant at that time. Our dividend policy has changed in the past and may change from time to time, and we cannot provide assurance that we will continue to declare dividends at all or in any particular amounts. A change in our dividend policy could have a negative effect on the market price of our common stock.

The price of our common stock may decline due to shares eligible for future sale or actual future sales of substantial amounts of our common stock.

Sales of substantial amounts of our common stock in the public market, or the perception that such sales may occur, could cause the market price of our common stock to decline. As of June 30, 2018, if all of our outstanding Class B common shares were converted into Class A common shares, our current directors and executive officers of the Company as a group would beneficially own approximately 10.95% of all outstanding Class A common shares after giving effect to such conversion. Sales of substantial amounts of our common stock in the public market by these persons, or the perception that such sales may occur, could cause the market price of our common stock to decline and could impair our ability to raise capital through the sale of additional equity securities.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our corporate headquarters are located in an approximately 100,000 square foot office building that we own at 470 East Paces Ferry Road, N.E., Atlanta, Georgia.

We have entered into leases for sales and technology development offices located in various cities in the United States and overseas. We believe our existing facilities are adequate for our current needs and that suitable additional or substitute space will be available as needed on commercially reasonable terms.

Each of our three segments makes use of the property at 470 East Paces Ferry Road and our SCM segment occupies office space that we lease in the United Kingdom, Sweden, Germany, The Netherlands, India, New Zealand and Australia.

ITEM 3. LEGAL PROCEEDINGS

- (a) Many of our installations involve products that are critical to the operations of our customers' businesses. Any failure in our products could result in a claim for substantial damages against us, regardless of our responsibility for such failure. Although we attempt to limit contractually our liability for damages arising from product failures or negligent acts or omissions, there can be no assurance that the limitations of liability

contained in our contracts will be enforceable in all instances. We are not currently a party to any material legal proceedings that would require disclosure under this Item.

(b) None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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Our Class A Common Shares are listed on the NASDAQ Global Select Market under the symbol `AMSWA`. As of July 6, 2018, there were 11,013 holders of Class A shares who held their stock either individually or in nominee or street names through various brokerage firms, and two holders of Class B Common Shares.

Market Price Information

The table below presents the quarterly high and low sales prices for American Software, Inc. Class A common stock as reported by NASDAQ, for the Company's last two fiscal years, as well as the amount of cash dividends declared in each quarter:

	High	Low	Cash Dividends Declared
Fiscal Year 2018			
First Quarter	\$ 11.97	\$ 9.69	\$ 0.11
Second Quarter	12.41	9.13	0.11
Third Quarter	13.21	11.63	0.11
Fourth Quarter	13.35	11.38	0.11
Fiscal Year 2017			
First Quarter	\$ 11.13	\$ 8.85	\$ 0.11
Second Quarter	11.59	9.97	0.11
Third Quarter	11.50	9.91	0.11
Fourth Quarter	11.11	9.97	0.11

Equity Compensation Plans

The following table discloses information regarding the Company's equity compensation plans as of April 30, 2018:

Plan Category	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-Average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column)
	3,275,836	\$ 9.90	1,396,543

Equity compensation
plans approved by
security holders

Dividend Policy

Since the third quarter of fiscal 2013, our Board of Directors has declared quarterly dividends of \$0.10 per share. On May 11, 2016, our Board of Directors increased the quarterly dividends to \$0.11 per share, payable to our Class A and Class B common stockholders. We currently expect to declare and pay cash dividends at this level on a quarterly basis in the future. The continuation of this policy, and payment of future cash dividends, will be at the sole discretion of the Board of Directors. In exercising this discretion, the Board of Directors will consider our profitability, financial condition, cash requirements, future prospects and other relevant factors. Our dividend policy has changed in the past and may change from time to time, and we cannot provide assurance that we will continue to declare dividends at all or in any particular amounts.

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The graph below reflects the cumulative stockholder return on the Company's shares compared to the return of the NASDAQ Composite Index and a peer group index on a quarterly basis. The graph reflects the investment of \$100 on April 30, 2013 in the Company's stock, the NASDAQ Stock Market-US Companies (NASDAQ Composite Index) and in the NASDAQ Computer Index, a published industry peer group index. The NASDAQ Computer Index consists of approximately 316 NASDAQ-listed companies, including computer hardware and software companies that furnish computer programming and data processing services and firms that produce computers, office equipment, and electronic component/accessories. The total cumulative dollar returns shown below represent the value that such investments would have had on April 30, 2018.

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
American Software(a)	\$ 100	\$ 118	\$ 125	\$ 124	\$ 156	\$ 192
NASDAQ Composite	100	124	148	143	182	212
NASDAQ Computer Index	100	128	156	152	210	256

(a) This series includes dividends paid over the disclosed period.

Purchases of Equity Securities by the Company

The following table summarizes repurchases of our stock in the quarter ended April 30, 2018:

Fiscal Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs*
February 1, 2018 through February 28, 2018		\$		946,321
March 1, 2018 through March 31, 2018		\$		946,321
April 1, 2018 through April 30, 2018		\$		946,321
Total Fiscal 2018 Fourth Quarter		\$		946,321

* The above share purchase authority was approved by the Board of Directors on August 19, 2002, when the Board approved a resolution authorizing the Company to repurchase up to 2.0 million shares of Class A common stock. This action was announced on August 22, 2002. The authorization has no expiration date.

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Transfer Agent

American Stock Transfer & Trust Company LLC

6201 15th Ave.

Brooklyn, NY 11219

Toll free: (800) 937-5449

Local & international: (718) 921-8124

<http://www.astfinancial.com>

Inquiries regarding stock transfers, lost certificates or address changes should be directed to the above address.

Market Makers

The following firms make a market in the Class A common shares of American Software, Inc:

Archipelago Stock Exchange	Maxim Group, LLC
B. Riley FBR, Inc.	Merrill Lynch, Pierce, Fenner Incorporated
Barclays Capital Inc./LE	Nasdaq Execution Services, LLC.
BNY Mellon Capital Markets, LLC	Nasdaq OMX PHLX, LLC.
Canaccord Genuity Inc.	Needham & Company, LLC
Cantor Fitzgerald & Co.	New York Stock Exchange
CBOE Trading, Inc.	Raymond, James & Associates
Citadel Derivatives Group, LLC	RBC Capital Markets, LLC
Citadel Securities, LLC	Stifel, Nicolaus & Company
Deutsche Banc Alex Brown	Sun Trading, LLC
Direct Edge ECN LCC	SunTrust Capital Markets, Inc.
EG Market Technologies, LLC	Susquehanna Financial Group, LLP
G1 Execution Services, LLC	Susquehanna Securities
Goldman Sachs & Co. LLC	Two Sigma Securities, LLC
IEX Services, LLC	UBS Securities, LLC
Imc Financial Markets	Virtu Americas, LLC
Jefferies, LLC	Wall Street Investor Services
Latour Trading, LLC	Wolverine Securities, LLC

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The selected consolidated financial data presented below as of and for the years ended April 30, 2018, 2017, 2016, 2015, and 2014 is derived from our audited consolidated financial statements.

Consolidated Statements of Operations Data:

	Years Ended April 30,				
	2018	2017	2016	2015	2014
	(In thousands, except per share data)				
Revenues:					
License fees	\$ 15,344	\$ 15,584	\$ 22,043	\$ 16,748	\$ 20,011
Services and other	53,518	48,313	51,099	47,215	44,377
Maintenance	43,841	42,389	40,747	38,910	36,213
Total revenues	112,703	106,286	113,889	102,873	100,601
Cost of revenues:					
License fees	7,077	7,563	7,688	7,675	4,043
Services and other	33,597	33,814	37,100	34,204	31,645
Maintenance	9,326	9,707	9,441	8,580	8,027
Total cost of revenues	50,000	51,084	54,229	50,459	43,715
Gross margin	62,703	55,202	59,660	52,414	56,886
Operating expenses:					
Research and development costs	11,877	11,889	11,248	11,088	9,074
Sales and marketing expense	20,658	20,287	22,164	18,667	20,414
General and administrative expenses	16,057	14,219	12,449	12,923	12,401
Amortization of acquisition-related intangibles	580	1,041	272	394	472
Total operating expenses	49,172	47,436	46,133	43,072	42,361
Operating income	13,531	7,766	13,527	9,342	14,525
Other income, net	2,184	13,849	1,173	1,060	1,372
Earnings before income taxes	15,715	21,615	14,700	10,402	15,897
Income tax expense	3,662	6,994	4,458	2,274	5,566
Net earnings	\$ 12,053	\$ 14,621	\$ 10,242	\$ 8,128	\$ 10,331
Earnings per common share(a):					
Basic	\$ 0.40	\$ 0.50	\$ 0.36	\$ 0.29	\$ 0.37
Diluted	\$ 0.40	\$ 0.49	\$ 0.35	\$ 0.28	\$ 0.37
Weighted average common shares Basic	30,080	29,232	28,727	28,283	27,636

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Diluted	30,472	29,567	29,005	28,614	28,111
Cash dividends declared	\$ 0.44	\$ 0.44	\$ 0.40	\$ 0.40	\$ 0.30
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$ 52,794	\$ 66,001	\$ 49,004	\$ 44,655	\$ 55,803
Investments short and long term	\$ 35,014	\$ 23,787	\$ 28,881	\$ 30,740	\$ 23,771
Working capital	\$ 61,402	\$ 66,789	\$ 54,801	\$ 46,340	\$ 58,820
Total assets	\$ 162,965	\$ 148,774	\$ 136,724	\$ 134,266	\$ 131,220
American Software, Inc. shareholders equity	\$ 112,584	\$ 103,750	\$ 94,894	\$ 92,926	\$ 92,560

- (a) Diluted per share amounts for Class A shares are shown above. Diluted per share for Class B shares under the two-class method are \$0.39, \$0.49, \$0.35, \$0.29, and \$0.37 for the years ended April 30, 2018, 2017, 2016, 2015, and 2014, respectively. See Note 1(r) to the Consolidated Financial Statements.

Table of Contents**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

The following discussion and analysis should be read in conjunction with Item 6. Selected Financial Data and Item 8. Financial Statements and Supplementary Data. This discussion contains forward-looking statements relating to our future financial performance, business strategy, financing plans and other future events that involve uncertainties and risks. You can identify these statements by forward-looking words such as anticipate, intend, plan, continue, could, grow, may, potential, predict, strive, estimate, believe, expect and similar expressions that convey uncertainty of future events or outcomes. Any forward-looking statements herein are made pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995. Our actual results could differ materially from the results anticipated by these forward-looking statements as a result of many known and unknown factors that are beyond our ability to control or predict, including but not limited to those discussed above in Risk Factors and elsewhere in this report. See also Special Cautionary Notice Regarding Forward-Looking Statements at the beginning of Item 1. Business.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We have based the following discussion and analysis of financial condition and results of operations on our consolidated financial statements, which we have prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Note 1 to the Consolidated Financial Statements for the fiscal year ended April 30, 2018, describes the significant accounting policies that we have used in preparing our consolidated financial statements. On an ongoing basis, we evaluate our estimates, including, but not limited to, those related to revenue/collectability, stock-based compensation, income taxes and business combination. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results could differ materially from these estimates under different assumptions or conditions.

We believe the critical accounting policies listed below affect significant judgments and estimates used in the preparation of the financial statements.

Revenue Recognition. We recognize revenue predominantly in accordance with the Software Revenue Recognition Topic of the Financial Accounting Standards Board's (FASB) Accounting Standards Codification. We recognize license revenues in connection with license agreements for standard proprietary software upon delivery of the software, provided we deem collection to be probable, the fee is fixed or determinable, there is persuasive evidence of an arrangement, and vendor-specific objective evidence (VSOE) exists with respect to any undelivered elements of the arrangement. We generally bill maintenance fees annually in advance and recognize the resulting revenues ratably over the term of the maintenance agreement. We derive revenues from services which primarily include consulting, implementation, training, Software as a Service (SaaS), hosting and managed services. We bill for these services primarily under time and materials arrangements and recognize fees as we perform the services. Deferred revenues represent advance payments or billings for software licenses, services, and maintenance billed in advance of the time we recognize revenues. We record revenues from sales of third-party products in accordance with Principal Agent Considerations within the Revenue Recognition Topic of the FASB Accounting Standards Codification. Furthermore, we evaluate sales through our indirect channel on a case-by-case basis to determine whether the transaction should be recorded gross or net, including but not limited to assessing whether or not we (1) act as principal in the transaction, (2) take title to the products, (3) have risks and rewards of ownership, such as the risk of loss for collection, delivery,

or returns, and (4) act as an agent or broker with compensation on a commission or fee basis. Accordingly, our sales through the DMI channel are typically recorded on a gross basis.

Generally, our software products do not require significant modification or customization. Installation of the products is routine and is not essential to their functionality. Our sales frequently include maintenance contracts and professional services with the sale of our software licenses. We have established VSOE for our maintenance contracts and professional services. We determine fair value based upon the prices we charge to customers when we sell these elements separately. We defer maintenance revenues, including those sold with the initial license fee, based on VSOE, and recognize the revenue ratably over the maintenance contract period. We recognize consulting and training service revenues, including those sold with license fees, as we perform the services based on their

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established VSOE. We determine the amount of revenue we allocate to the licenses sold with services or maintenance using the residual method of accounting. Under the residual method, we allocate the total value of the arrangement first to the undelivered elements based on their VSOE and allocate the remainder to license fees. SaaS revenues are recognized ratably over the subscription term as the customer has no ability to take delivery of the software, and the underlying arrangements typically include a single fee for the service that is billed monthly, quarterly or annually.

Stock-Based Compensation. We estimate the value of options granted on the date of grant using the Black-Scholes option pricing model. Management judgments and assumptions related to volatility, the expected term and the forfeiture rate are made in connection with the calculation of stock compensation expense. We periodically review all assumptions used in our stock option pricing model. Changes in these assumptions could have a significant impact on the amount of stock compensation expense.

Income Taxes. We provide for the effect of income taxes on our financial position and results of operations in accordance with the Income Tax Topic of the FASB Accounting Standards Codification. Under this accounting guidance, income tax expense is recognized for the amount of income taxes payable or refundable for the current year and for the change in net deferred tax assets or

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liabilities resulting from events that are recorded for financial reporting purposes in a different reporting period than recorded in the tax return. Management must make significant assumptions, judgments and estimates to determine our current provision for income taxes and also our deferred tax assets and liabilities and any valuation allowance to be recorded against our net deferred tax asset. Our judgments, assumptions and estimates relative to the current provision for income tax take into account current tax laws, our interpretation of current tax laws, allowable deductions, tax planning strategies, projected tax credits and possible outcomes of current and future audits conducted by foreign and domestic tax authorities. Changes in tax laws or our interpretation of tax laws and the resolution of current and future tax audits could significantly impact the amounts provided for income taxes in our financial position and results of operations. Our assumptions, judgments and estimates relative to the value of our deferred tax asset take into account our expectations of the amount and category of future taxable income. Actual operating results and the underlying amount and category of income in future years, which could significantly increase tax expense, could render inaccurate our current assumptions, judgments and estimates of recoverable net deferred taxes.

Business Combinations and Intangible Assets Including Goodwill. We account for business combinations using the acquisition method of accounting and accordingly, the identifiable assets acquired and liabilities assumed are recorded based upon management's estimates of current fair values as of the acquisition date. The estimation process includes analyses based on income and market approaches. Goodwill represents the excess purchase price over the fair value of net assets, including the amount assigned to identifiable intangible assets. The goodwill generated is due in part to the synergies that are not included in the fair value of identifiable intangible assets. Goodwill recorded in an acquisition is assigned to applicable reporting units based on expected revenues. Identifiable intangible assets with finite lives are amortized over their useful lives. Amortization of current technology is recorded in cost of revenues-license and amortization of all other intangible assets is recorded in amortization of acquisition-related intangibles. Acquisition-related costs, including advisory, legal, accounting, valuation and other costs, are expensed in general and administrative expenses in the periods in which the costs are incurred. The results of operations of acquired businesses are included in the consolidated financial statements from the acquisition date.

RESULTS OF OPERATIONS

The following table sets forth certain revenue and expense items as a percentage of total revenues for the three years ended April 30, 2018, 2017, and 2016 and the percentage increases and decreases in those items for the years ended April 30, 2018 and 2017:

	Percentage of Total Revenues			Pct. Change in Dollars 2018 vs. 2017	Pct. Change in Dollars 2017 vs. 2016
	2018	2017	2016		
Revenues:					
License	14%	15%	19%	(2)%	(29)%
Services and other	47	45	45	11	(5)
Maintenance	39	40	36	3	4
Total revenues	100	100	100	6	(7)
Cost of revenues:					
License	6	7	7	(6)	(2)
Services and other	30	32	33	(1)	(9)

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Maintenance	8	9	8	(4)	3
Total cost of revenues	44	48	48	(2)	(6)
Gross margin	56	52	52	14	(7)
Research and development	11	11	10		6
Sales and marketing	18	19	19	2	(8)
General and administrative	14	13	11	13	14
Amortization of acquisition-related intangibles	1	1		(44)	nm
Total operating expenses	44	44	40	4	3
Operating income	12	7	12	74	(43)
Other income:					
Interest income	1	1	1	25	(7)
Other, net	1	12		(95)	nm
Earnings before income taxes	14	21	13	(27)	47
Income tax expense	3	7	4	(48)	57
Net earnings	11%	14%	9%	(18)%	43%

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nm not meaningful

Economic Overview and Significant Trends in Our Business

Corporate capital spending trends and commitments are the primary determinants of the size of the market for business software. Corporate capital spending is, in turn, a function of general economic conditions in the U.S. and abroad and in particular may be affected by conditions in U.S. and global credit markets. In recent years, the weakness in the overall global economy and the U.S. economy in particular has resulted in reduced expenditures in the business software market.

In April 2018, the International Monetary Fund (IMF) provided an update to the World Economic Outlook (WEO) for the 2018 and 2019 world economic growth forecast. The update noted that, *The upswing in global investment and trade continued in the second half of 2017. At 3.8 percent, global growth in 2017 was the fastest since 2011. With financial conditions still supportive, global growth is expected to tick up to a 3.9 percent rate in both 2018 and 2019. Advanced economies will grow faster than potential this year and next; euro area economies are set to narrow excess capacity with support from accommodative monetary policy, and expansionary fiscal policy will drive the US economy above full employment. Aggregate growth in emerging market and developing economies is projected to firm further, with continued strong growth in emerging Asia and Europe and a modest upswing in commodity exporters after three years of weak performance.*

For the fiscal 2019, we expect the global economy to improve when compared to the prior year, which could result in an improved selling environment. Overall information technology spending is improving as a result of the current global economic environment. We believe information technology spending will incrementally improve over the long term as increased global competition forces companies to improve productivity by upgrading their technology systems. Although this improvement could slow or regress at any time, due in part to concerns in global capital markets and general economic conditions, we believe that our organizational and financial structure will enable us to take advantage of any sustained economic rebound. Customers continue to take long periods to evaluate discretionary software purchases.

We believe the improvement in economic conditions may be driving some businesses to invest in achieving more process and efficiency enhancements in their operations and to invest in solutions that improve operating margins, rather than make large infrastructure-type technology purchases. If this trend continues, we believe it may tend to favor solutions such as our Logility supply chain solutions, which are designed to provide a more rapid return on investment and are targeted at some of the largest profit drivers in a customer's business. While the recent low growth environment has had a particularly adverse impact on the weaker companies in our target markets, we believe a large percentage of our customers are seeking to make investments to strengthen their operations, and some are taking advantage of current economic conditions to gain market share.

Business opportunities and risks

We currently view the following factors as the primary opportunities and risks associated with our business:

Dependence on Capital Spending Patterns. There is risk associated with our dependence on the capital spending patterns of U.S. and international businesses, which in turn are functions of economic trends and conditions over which we have no control.

Acquisition Opportunities. There are opportunities for selective acquisitions or investments to provide opportunities to expand our sales distribution channels and/or broaden our product offering by providing additional solutions for our target markets.

Acquisition Risks. There are risks associated with acquisitions of complementary companies, products and technologies, including the risks that we will not achieve the financial and strategic goals that we contemplate at the time of the transaction. More specifically, in any acquisition we will face risks and challenges associated with the uncertain value of the acquired business or assets, the difficulty of assimilating operations and personnel, integrating acquired technologies and products and maintaining the loyalty of the customers of the acquired business.

Competitive Technologies. There is a risk that our competitors may develop technologies that are substantially equivalent or superior to our technology.

Competition in General. There are risks inherent in the market for business application software and related services, which has been and continues to be intensely competitive; for example, some of our competitors may become more aggressive with their prices and/or payment terms, which may adversely affect our profit margins.

For more information, please see *Risk Factors* in Item 1A. above.

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Recent Accounting Pronouncements

For information with respect to recent accounting pronouncements, if any, and the impact of these pronouncements on our consolidated financial statements, if any, see Note 1 of Notes to Consolidated Financial Statements included elsewhere in this Annual Report.

Market Conditions by Operating Segment

We operate and manage our business in three segments based on software and services provided in three key product markets: (1) SCM, which provides collaborative supply chain solutions to streamline and optimize the production, distribution and management of products between trading partners; (2) IT Consulting, which consists of IT staffing and consulting services and (3) Other, which consists of (i) American Software ERP, a provider of purchasing and materials management, customer order processing, financial, human resources, and manufacturing functions, and (ii) unallocated corporate overhead expenses. The SCM segment represents the business of Logility, as well as DMI, Halo and NGC.

Our SCM segment experienced a 9% increase in revenues during fiscal 2018 when compared to fiscal 2017, primarily due to a 22% increase in services and other revenues and a 4% increase in maintenance revenue partially offset by a 1% decrease in license fees. Our SCM segment experienced a 3% decrease in revenues during fiscal 2017 when compared to fiscal 2016, due primarily to a 28% decrease in license fees that was partially offset by a 6% increase in services and other revenues, and 4% increase in maintenance revenue.

Our IT Consulting segment experienced an approximately 6% decrease in revenues in fiscal 2018 when compared to fiscal 2017 and a decrease in revenues of approximately 18% in fiscal 2017 when compared to fiscal 2016, due primarily to a fluctuations in IT staffing work at our largest customer and in fiscal year 2017 a decrease in customer project work. As companies have moved to cut costs and limit IT budgets, they have utilized more outsourcing services, which tend to be more cost-effective for them. In the past, this trend has resulted in increased business for this segment. However, there is a countervailing trend to outsourcing IT to international markets that historically have been more price competitive than domestic sources like ourselves. Our largest consulting customer comprised 45% of our IT Consulting revenues in fiscal 2018, 42% in fiscal 2017 and 38% in fiscal 2016. The loss of this customer would negatively and materially affect our IT Consulting business.

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The Other segment revenues increased 1% in fiscal 2018 when compared to fiscal 2017, primarily due to a 15% increase in services and other revenues that was partially offset by a 12% decrease in license fees and a 4% decrease in maintenance revenues. The Other segment revenues decreased 13% in fiscal 2017 when compared to fiscal 2016, primarily due to a 64% decrease in license fees and an 8% decrease in services and other revenues partially offset by a 2% increase in maintenance revenues.

REVENUES

	Years Ended April 30,						% of Total Revenues		
	2018	2017	2016	2018 to 2017	2017 to 2016	2018	2017	2016	
	(in thousands)								
License	\$ 15,344	\$ 15,584	\$ 22,043	(2)%	(29)%	14%	15%	19%	
Services and other	53,518	48,313	51,099	11%	(5)%	47%	45%	45%	
Maintenance	43,841	42,389	40,747	3%	4%	39%	40%	36%	
Total revenues	\$ 112,703	\$ 106,286	\$ 113,889	6%	(7)%	100%	100%	100%	

For the year ended April 30, 2018, the 6% increase in total revenues was attributable primarily to a 11% increase in services and other revenue, a 3% increase in maintenance revenues partially offset by a 2% decrease in license revenues.

For the year ended April 30, 2017, the 7% decrease in total revenues was attributable primarily to a 29% decrease in license revenue, a 5% decrease in services and other revenues partially offset by a 4% increase in maintenance revenues.

Due to intensely competitive markets, we discount license fees from our published list price due to pricing pressure in our industry. Numerous factors contribute to the amount of the discounts provided, such as previous customer purchases, the number of customer sites utilizing the software, the number of modules purchased and the number of users, type of platform deployment, as well as the overall size of the contract. While all these factors affect the discount amount of one contract, the overall percentage discount has not materially changed in the recent reported fiscal periods.

The change in our revenues from period to period is primarily due to the volume of products and related services sold in any period and the amounts of products or modules purchased with each sale.

International revenues represented approximately 19% of total revenues for the year ended April 30, 2018, 18% of total revenues for the year ended April 30, 2017, and 17% for the year ended April 30, 2016. Our international revenues may fluctuate substantially from period to period primarily because we derive these revenues from a relatively small number of customers in a given period.

License revenues

Years Ended April 30,

	2018	2017	2016	% Change	
	(in thousands)			2018 to 2017	2017 to 2016
Supply Chain Management	\$ 15,177	\$ 15,394	\$ 21,508	(1)%	(28)%
Other	167	190	535	(12)%	(64)%
Total license revenues	\$ 15,344	\$ 15,584	\$ 22,043	(2)%	(29)%

For the year ended April 30, 2018, license fee revenues decreased by 2% when compared to the previous year due primarily to lower overall business information technology spending. SCM experienced a 1% decrease in license fees primarily due to the increased sales of our products on our Cloud Services platform that require revenue to be deferred over the life of the contracted period, which is typically one to three years. Our Other business segment experienced a 12% decrease in license fees for the year ended April 30, 2018 when compared to the same period in the prior year due to the timing of selling into the installed customer base. SCM constituted 99%, 99% and 98% of our total license fee revenues for the years ended April 30, 2018, 2017 and 2016, respectively.

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For the year ended April 30, 2017, license fee revenues decreased by 29% when compared to the previous year due primarily to the economic uncertainty related to the Brexit vote in the United Kingdom, U.S. elections and lower overall business information technology spending. SCM experienced a 28% decrease in license fees partly due to the overall uncertainty in the direction of the global economy and increased sales of our products on our Cloud Services platform that require revenue to be deferred over the life of the contracted period, which is typically one to three years. Our Other business segment experienced a 64% decrease in license fees for the year ended April 30, 2017 when compared to the same period in the prior year due to the overall uncertainty in the direction of the global economy and to the timing of selling into the installed customer base.

The direct sales channel provided approximately 85% of license fee revenues for the year ended April 30, 2018, compared to approximately 77% in fiscal 2017 and 79% in fiscal 2016. The increase in direct license fees from fiscal 2017 to fiscal 2018 was largely the result of higher overall business information technology spending, particularly at our direct channel which tends to be larger size transactions. The decrease in direct license fees from fiscal 2016 to fiscal 2017 was largely the result of economic uncertainty related to the Brexit vote in the United Kingdom, U.S. elections and lower overall business information technology spending, particularly at our direct channel which tends to be larger size transactions.

For the year ended April 30, 2018, our margins after commissions on direct sales were approximately 84%, and our margins after commissions on indirect sales were approximately 36%. For the year ended April 30, 2017, our margins after commissions on direct sales were approximately 85%, and our margins after commissions on indirect sales were approximately 46%. For the year ended April 30, 2016, our margins after commissions on direct sales were approximately 85%, and our margins after commissions on indirect sales were approximately 48%. The margins after commissions were relatively consistent as a range of 84% to 85% for direct and a range of 36% and 48% for indirect sales. The indirect channel margins for the fiscal year decreased when compared to the same periods in the prior year due to the mix of value-added reseller (VAR) commission rates. DMI is the source of the bulk of our indirect sales and the commission percentage varies based on whether the sale is domestic or international.

Services and other revenues

	Years Ended April 30,			% Change	
	2018	2017	2016	2018 to 2017	2017 to 2016
	(in thousands)				
Supply Chain Management	\$ 34,127	\$ 27,873	\$ 26,310	22%	6%
IT Consulting	18,460	19,633	23,913	(6)%	(18)%
Other	931	807	876	15%	(8)%
Total services and other revenues	\$ 53,518	\$ 48,313	\$ 51,099	11%	(5)%

The 11% increase in services and other revenues for the year ended April 30, 2018 when compared to fiscal 2017 was due primarily to our SCM segment which increased 22% in services and other revenues for the year ended April 30, 2018 when compared to fiscal 2017 as a result of an increase in services revenue related to our Cloud Services area and utilization from project implementation services. Our Other segment increased 15% in services and other revenues for the year ended April 30, 2018 when compared to fiscal 2017 as a result of timing of implementation project work. Partially offsetting the increase was our IT Consulting segment which decreased 6% in fiscal 2018 when compared to fiscal 2017 due to the completion in the first half of fiscal 2017 of an IT project from one of our larger

customers.

The 5% decrease in services and other revenues for the year ended April 30, 2017 when compared to fiscal 2016 was due primarily to a 18% decrease at our IT Consulting segment due to the completion in the first half of fiscal 2016 of an IT project from one of our larger customers. Our Other segment decreased 8% in services and other revenues for the year ended April 30, 2017 when compared to fiscal 2016 as a result of timing of implementation project work at NGC. Partially offsetting the decrease was our SCM segment which increased 6% in services and other revenues for the year ended April 30, 2017 when compared to fiscal 2016 as a result of an increase in utilization from project implementation services and services revenue related to our Logility Cloud Services area.

As of April 30, 2018, Cloud Services Annual Contract Value (ACV) was \$12.7 million, an increase of approximately 108% compared to \$6.1 million as of the same date for the prior year. ACV is comprised of software-as-a-service (SaaS) of \$9.8 million compared to approximately \$3.8 million as of the same date last year and other cloud services ACV of \$2.9 million compared to \$2.3 million as of the same date last year. ACV is a forward-looking operating measure used by management to better understand cloud services (SaaS and other related cloud services) revenue trends within our business, as it reflects our current estimate of revenue to be generated under existing client contracts in the forward 12-month period.

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In our software segments, we have observed that there is a tendency for services and other revenues to lag changes in license revenues by one to three quarters, as new licenses in one quarter often involve implementation and consulting services in subsequent quarters, for which we recognize revenues only as we perform those services.

Maintenance revenues

	Years Ended April 30,			% Change	
	2018	2017	2016	2018 to 2017	2017 to 2016
	(in thousands)				
Supply Chain Management	\$ 42,309	\$ 40,790	\$ 39,183	4%	4%
Other	1,532	1,599	1,564	(4)%	2%
Total maintenance revenues	\$ 43,841	\$ 42,389	\$ 40,747	3%	4%

The 3% increase in total maintenance revenues for the year ended April 30, 2018 was due to a 4% increase in maintenance revenues from our SCM segment due to improved customer retention and additional license sales. This increase was partially offset by a 4% decrease in our Other segment due lower customer renewals and lower software license sales.

The 4% increase in total maintenance revenues for the year ended April 30, 2017 was primarily due to a 4% increase in maintenance revenues from our SCM and Other segments as a result of an increase in maintenance revenue from recent software license sales.

The SCM segment's maintenance revenues constituted 96% of total maintenance revenues for the years ended April 30, 2018, 2017 and 2016. Typically, our maintenance revenues have had a direct relationship to current and historic license fee revenues, since new licenses are the potential source of new maintenance customers.

GROSS MARGIN:

The following table provides both dollar amounts and percentage measures of gross margin:

	Years Ended April 30,					
	2018		2017		2016	
	(in thousands)					
Gross margin on license fees	\$ 8,267	54%	\$ 8,021	51%	\$ 14,355	65%
Gross margin on services and other	19,921	37%	14,499	30%	13,999	27%
Gross margin on maintenance	34,515	79%	32,682	77%	31,306	77%
Total gross margin	\$ 62,703	56%	\$ 55,202	52%	\$ 59,660	52%

The total gross margin percentage for the year ended April 30, 2018 increased to 56% in fiscal 2018 when compared to 52% in fiscal 2017 due to the increase in gross margin percentage for license fees margins, services and other gross margins and maintenance gross margin. The total gross margin percentage for the year ended April 30, 2017 was

primarily the same as the prior fiscal year due to the increase in gross margin percentage on services and other gross margins. This was partially offset by a decrease in license fees margins when compared to the prior year.

Gross Margin on License Fees

The increase in license fee gross margin percentage for the year ended April 30, 2018 when compared to fiscal 2017 was primarily due to lower capitalized software amortization expense. We expect capitalized software amortization expense to increase in fiscal 2019 when compared to fiscal 2018.

The decrease in license fee gross margin percentage for the year ended April 30, 2017 when compared to fiscal 2016 was primarily due to the 29% decrease in license fees in fiscal 2017 when compared to the prior year.

License fee gross margin percentage tends to be directly related to the level of license fee revenues due to the relatively fixed cost of computer software amortization expense, amortization of acquired software and the sales mix between our direct and indirect channel.

Table of Contents***Gross Margin on Services and Other***

For the year ended April 30, 2018, our gross margin percentage on services and other revenues increased from 30% in fiscal 2017 to 37% in fiscal 2018 primarily due to higher gross margins in our SCM segment services gross margin which increased from 38% in fiscal 2017 to 46% in fiscal 2018 primarily due to an increase in our Cloud Service revenue which has higher margins. Our IT Consulting segment services gross margin also increased from 18% in fiscal 2017 to 21% in fiscal 2018 due to an increase in project related billing. Our Other segment increased from 33% in fiscal 2017 to 44% in fiscal 2018 due to improved billing utilization rates.

For the year ended April 30, 2017, our gross margin percentage on services and other revenues increased from 27% in fiscal 2016 to 30% in fiscal 2017 due to higher gross margins in our Other segment, which increased from 20% in fiscal 2016 to 39% in fiscal 2017 due to improved billing utilization rates. Our SCM segment services gross margin was 38% and 39% in fiscal 2017 and fiscal 2016, respectively. Our IT Consulting segment services gross margin was 18% in fiscal 2017 and fiscal 2016.

As discussed above, our IT Consulting segment typically has lower margins when compared to the Other segments that have higher margin implementation service revenue, so a decrease in the percentage of services revenues from our IT Consulting segment tends to cause our overall services gross margin percentage to increase. The IT Consulting segment was 34%, 41% and 47% of the Company's services revenues in fiscal 2018, 2017 and 2016, respectively. Our SCM segment was 64%, 57% and 51% of the Company's services revenues in fiscal 2018, 2017 and 2016, respectively. Our Other segment was 2%, 2% and 2% of the Company's services revenues in fiscal 2018, 2017 and 2016, respectively.

Gross Margin on Maintenance

Maintenance gross margin percentage remained relatively consistent for the years ended April 30, 2018, 2017 and 2016 in the range of 77% to 79%.

EXPENSES

	Years Ended April 30,					
				% of Revenues		
	2018	2017	2016	2018	2017	2016
	(in thousands)					
Research and development	\$ 11,877	\$ 11,889	\$ 11,248	11%	11%	10%
Sales and marketing	20,658	20,287	22,164	18%	19%	19%
General and administrative	16,057	14,219	12,449	14%	13%	11%
Amortization of acquisition-related intangible assets	580	1,041	272	1%	1%	
Other income, net	2,184	13,849	1,173	2%	13%	1%
Income tax expense	3,662	6,994	4,458	3%	7%	4%

Table of Contents**Research and Development**

Gross product research and development costs include all non-capitalized and capitalized software development costs. A breakdown of the research and development costs is as follows:

	April 30, 2018	Percent Change	Years Ended April 30, 2017	Percent Change	April 30, 2016
	(in thousands)				
Total capitalized computer software development costs	\$ 4,804	29%	\$ 3,724	15%	\$ 3,246
Percentage of gross product research and development costs	29%		24%		22%
Total research and development expense	11,877	0%	11,889	6%	11,248
Percentage of total revenues	11%		11%		10%
Total research and development expense and capitalized computer software development costs	\$ 16,681	7%	\$ 15,613	8%	\$ 14,494
Percentage of total revenues	15%		15%		13%
Total amortization of capitalized computer software development costs*	\$ 3,690	(13)%	\$ 4,250	8%	\$ 3,921

* Included in cost of license fees

For the year ended April 30, 2018, gross product research and development costs increased by 7% primarily due to increased headcount from the Halo acquisition and additional hiring. Capitalized software development costs increased in fiscal 2018 compared to fiscal 2017 due to timing of project work. Amortization of capitalized software development decreased 13% in fiscal 2018 when compared to fiscal 2017 due to timing of project releases.

For the year ended April 30, 2017, gross product research and development costs increased by 8% primarily due to increased headcount from the AdapChain acquisition and additional hiring. Capitalized software development costs increased in fiscal 2017 compared to fiscal 2016 due to timing of project work. Amortization of capitalized software development increased 8% in fiscal 2017 when compared to fiscal 2016 due to timing of project work.

Sales and Marketing

In the year ended April 30, 2018, the increase in sales and marketing expenses compared to fiscal 2017 was due primarily to a higher headcount and higher sales commissions. In the year ended April 30, 2017, the decrease in sales and marketing expenses compared to fiscal 2016 was due primarily to a lower headcount and lower sales commission as a result of lower direct license fees.

General and Administrative

For the year ended April 30, 2018, the increase in general and administrative expenses compared to fiscal 2017 was primarily due to an increase in the overhead costs related to the Halo acquisition and an increase in variable

compensation expense.

For the year ended April 30, 2017, the increase in general and administrative expenses compared to fiscal 2016 was primarily due to recording a Research and Development State tax credit against withholding taxes of approximately \$1.3 million in fiscal 2016 compared to \$436,000 in fiscal 2017 and to a lesser extent an increase in the overhead costs related to the AdapChain acquisition and audit and tax fees. This was partially offset by a decrease in variable compensation expense.

The total number of employees was 462 on April 30, 2018, 372 on April 30, 2017 and 420 on April 30, 2016.

Amortization of Acquisition-related Intangible Assets

For the year ended April 30, 2018, we recorded \$1,849,000 in intangible amortization expense, of which \$580,000 is included in operating expenses and \$1,269,000 is included in cost of license fees.

For the year ended April 30, 2017, we recorded \$1,659,000 in intangible amortization expense, of which \$1,041,000 is included in operating expenses and \$618,000 is included in cost of license fees.

Table of Contents**Operating Income/(Loss)**

	Years Ended April 30,			% Change	
	2018	2017	2016	2018 to 2017	2017 to 2016
	(in thousands)				
Supply Chain Management	\$ 19,580	\$ 13,103	\$ 17,793	49%	(26)%
IT Consulting	985	890	1,327	11%	(33)%
Other*	(7,034)	(6,227)	(5,593)	13%	11%
Total Operating Income	\$ 13,531	\$ 7,766	\$ 13,527	74%	(43)%

* Includes certain unallocated expenses.

Our SCM segment increased operating income by 49% in fiscal 2018 compared to fiscal 2017 primarily due to a 9% increase in revenues and an increase in gross margins related to an increase in Cloud services revenue. This was partially offset by the increased costs associated with the Halo acquisition. Our SCM segment decreased operating income by 26% in fiscal 2017 compared to fiscal 2016 primarily due to a 2% decrease in revenues and the increased cost associated with the AdapChain acquisition.

Our IT Consulting segment operating income increased 11% in fiscal 2018 compared to fiscal 2017 primarily due to an increase in higher margin billable project services. Our IT Consulting segment operating income decreased 33% in fiscal 2017 compared to fiscal 2016 primarily due to a 18% decrease in revenues.

The increase in the Other segment operating loss in fiscal 2018 when compared to fiscal 2017 was due primarily to an increase in corporate variable compensation. The increase in the Other segment operating loss in fiscal 2017 when compared to fiscal 2016 was due primarily to the 13% decrease in revenues in fiscal 2017 when compared to fiscal 2016.

Other Income

Other income is comprised of net interest and dividend income, rental income net of related depreciation expenses, exchange rate gains and losses, realized and unrealized gains and losses from investments and gains from the sales of real estate. Other income was approximately \$2.2 million in the year ended April 30, 2018 compared to \$13.8 million in fiscal 2017. The decrease was primarily due to the sale of real estate for \$11.8 million in the fourth quarter of fiscal 2017 and lower rental income from the leases on our Atlanta property of \$357,000 in fiscal 2018 compared to \$774,000 in fiscal 2017. This decrease was partially offset by higher interest income of \$1,575,000 in fiscal 2018 compared to \$1,257,000 in fiscal 2017 and lower exchange rate losses of approximately \$16,000 compared to \$285,000 for the same period last year.

Other income was approximately \$13.8 million in the year ended April 30, 2017 compared to \$1.2 million in fiscal 2016. The increase was primarily due to sale of real estate for \$11.8 million in the fourth quarter of fiscal 2017 and a higher unrealized gain on investments of \$1.3 million compared to an unrealized loss of \$110,000 for fiscal 2016. This was partially offset by lower rental income from the leases on our Atlanta property of \$774,000 in fiscal 2017 compared to \$1,031,000 in fiscal 2016, lower interest income of \$1,257,000 in fiscal 2017 compared to \$1,346,000 in

fiscal 2016, higher exchange rate losses of approximately \$285,000 compared to \$239,000 for the same period last year and higher realized losses of \$936,000 from investments in fiscal 2017 when compared to \$878,000 in fiscal 2016.

For the years ended April 30, 2018 and 2017, our investments generated an annualized yield of approximately 1.36% and 1.62%, respectively.

Income Taxes

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (the Act), which significantly changed U.S. tax law. The Act lowered our U.S. statutory federal income tax rate from 35% to 21% effective January 1, 2018. For fiscal year 2018, our blended U.S. federal statutory tax rate is 30.3%. This is the result of using the tax rate of 35% for the first eight months of fiscal year 2018 and the reduced tax rate of 21% for the final four months of fiscal year 2018. During the year ended April 30, 2018, we recorded a \$1.2 million benefit from the impact of changes in the tax rate, primarily on deferred tax assets and liabilities, which was included in income tax expense on our consolidated statement of operations and deferred income taxes on our consolidated balance sheet. We remeasured our deferred taxes to reflect the reduced rate that will apply when these deferred taxes are settled or realized in future periods. To calculate the remeasurement of deferred taxes, we estimated when the existing deferred taxes will be settled or realized.

Table of Contents**Operating Pattern**

We experience an irregular pattern of quarterly and annual operating results, caused primarily by fluctuations in both the number and size of software license contracts received and delivered from quarter to quarter and our ability to recognize revenues in that quarter and annually in accordance with our revenue recognition policies. We expect this pattern to continue.

LIQUIDITY AND CAPITAL RESOURCES*Sources and Uses of Cash*

We have historically funded, and continue to fund, our operations and capital expenditures primarily with cash generated from operating activities. The changes in net cash that our operating activities provide generally reflect the changes in net earnings and non-cash operating items plus the effect of changes in operating assets and liabilities, such as investment trading securities, trade accounts receivable, trade accounts payable, accrued expenses and deferred revenue. We have no debt obligations or off-balance sheet financing arrangements, and therefore, we used no cash for debt service purposes.

The following tables show information about our cash flows and liquidity positions as of and for the fiscal years ended April 30, 2018, 2017 and 2016. You should read these tables and the discussion that follows in conjunction with our consolidated statements of cash flows contained in Item 8 of this report.

	Years ended April 30,		
	2018	2017	2016
	(in thousands)		
Net cash provided by operating activities	\$ 6,754	\$ 19,780	\$ 18,291
Net cash (used in) provided by investing activities	(15,382)	4,238	(3,901)
Net cash used in financing activities	(4,579)	(7,021)	(10,041)
Net change in cash and cash equivalents	\$ (13,207)	\$ 16,997	\$ 4,349

The decrease in cash provided by operating activities in fiscal 2018 compared to fiscal 2017 was due primarily to:

(1) an increase in the purchases of trading securities due to timing, (2) a decrease in accounts payable and other liabilities in fiscal 2018 when compared to an increase in fiscal 2017 due primarily to timing and the amount of sales commissions, bonuses and tax liabilities, (3) an increase in accounts receivable in fiscal 2018 when compared to a decrease in fiscal 2017 due to timing of sales and billing, (4) a decrease in net earnings, (5) a decrease in the net proceeds from sales and maturities of trading securities in fiscal 2018 compared to fiscal 2017 due to timing of purchases and maturity dates, (6) an increase in prepaid expenses and other assets in fiscal 2018 compared to the increase in fiscal 2017 due to timing of purchases and (7) lower depreciation and amortization expense due to timing of closing capitalized software projects and the sale of real estate in fiscal 2017 (8) higher gains on unrealized investments due to timing of sales of investments, and (9) a decrease in deferred income taxes in fiscal 2018 compared to fiscal 2017 due to timing.

These factors were partially offset by: (1) gain on the sale of fixed assets from our sale of real estate in fiscal 2017, (2) an increase in deferred revenues in fiscal 2018 when compared to a fiscal 2017 primarily due timing of cloud and maintenance revenue recognition, and (3) a higher stock-based compensation expense in fiscal 2018 compared to last year due to the more options granted.

The increase in cash used in investing activities in fiscal 2018 compared to cash provided by investing activities in fiscal 2017 was due (1) to proceeds from the sale of real estate in fiscal 2017, (2) an increase in the purchase of business in fiscal 2018 compared to fiscal 2017, (3) an increase in capitalized software development costs due to the timing of R&D efforts and (4) higher purchases of equipment.

The decrease in cash used in financing activities in fiscal 2018 when compared to fiscal 2017 was due primarily to: (1) an increase in proceeds from exercise of stock options, (2) no payment for accrued acquisition consideration in fiscal 2018 compared to fiscal 2017. This was partially offset by an increase in cash dividends paid on common stock in fiscal 2018 when compared to fiscal 2017 due to an increase in the shares outstanding.

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The following table provides information regarding the changes in our total cash and investments position:

	As of April 30,	
	2018	2017
	(in thousands)	
Cash and cash equivalents	\$ 52,794	\$ 66,001
Investments	35,014	23,787
Total cash and investments	\$ 87,808	\$ 89,788

Net (decrease) increase in total cash and investments	\$ (1,980)	\$ 11,903
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The following table provides information regarding our known contractual obligations as of April 30, 2018 (in thousands): (See Notes to Consolidated Financial Statements Note 8)

Contractual Obligations	Total	Payments due by Period			
		1 year	1-3 years	3-5 years	More than 5 years
Operating Leases	\$ 2,207	\$ 1,056	\$ 765	\$ 386	\$

As a result of the positive cash flows from operations our business has generated in recent periods, and because as of April 30, 2018, we had \$87.8 million in cash and cash equivalents and investments with no debt, we believe that our sources of liquidity and capital resources will be sufficient to satisfy our presently anticipated requirements for working capital, capital expenditures and other corporate needs during at least the next twelve months. However, at some future date we may need to seek additional sources of capital to meet our requirements. If such need arises, we may be required to raise additional funds through equity or debt financing. We currently do not have a bank line of credit. We can provide no assurance that bank lines of credit or other financing will be available on terms acceptable to us. If available, such financing may result in dilution to our shareholders or higher interest expense.

Days Sales Outstanding (DSO) in accounts receivable were 68 and 69 days as of April 30, 2018 and April 30, 2017, respectively. Our current ratio on April 30, 2018 was 2.3 to 1, compared to 2.6 to 1 on April 30, 2017. DSO can fluctuate significantly on a quarterly basis due to a number of factors including the percentage of total revenues that comes from software license sales (which typically have installment payment terms), seasonality, shifts in customer buying patterns, the timing of customer payments and annual maintenance renewals, lengthened contractual payment terms in response to competitive pressures, the underlying mix of products and services, and the geographic concentration of revenues.

On August 19, 2002, our Board of Directors approved a resolution authorizing the repurchase of up to 2.0 million shares of our Class A common stock. These repurchases have been and will be made through open market purchases at prevailing market prices. The timing of any repurchases will depend upon market conditions, the market price of our common stock and management's assessment of our liquidity and cash flow needs. For this repurchase plan, through April 30, 2018, we have repurchased 1,053,679 shares of common stock at a cost of approximately \$6.2 million. Under all repurchase plans as of April 30, 2018, we have repurchased 4,588,632 shares of common stock at a cost of approximately \$25.6 million.

Off-Balance Sheet Arrangements

We are not a party to any off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

See Item 5 of this report, under the caption *Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities*.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency. For the fiscal years ended April 30, 2018 and 2017, we generated 19% and 18% of our revenues outside of the United States, respectively. We typically denominate our international sales in U.S. dollars, euros or British pounds sterling. Our consolidated financial statements are presented in U.S. dollars, which is also the functional currency for our foreign operations. Where transactions may be denominated in foreign currencies, we are subject to market risk with respect to fluctuations in the relative value

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of currencies. We recorded exchange rate losses of approximately \$16,000 and \$285,000 in fiscal years 2018 and 2017, respectively. We estimate that a 10% movement in foreign currency rates would have the effect of creating an exchange gain or loss of approximately \$402,000.

Interest Rates and Other Market Risks. We manage our interest rate risk by maintaining an investment portfolio of trading investments with high credit quality and relatively short average maturities. These instruments include, but are not limited to, money-market instruments, bank time deposits, and taxable and tax-advantaged variable rate and fixed rate obligations of corporations, municipalities, and national, state, and local government agencies, in accordance with an investment policy approved by our Board of Directors. These instruments are denominated in U.S. dollars. The fair market value of our cash equivalents and investments as of April 30, 2018 was approximately \$82 million.

We also hold cash balances in accounts with commercial banks in the United States and foreign countries. These cash balances represent operating balances only and are invested in short-term time deposits of the local bank. Such operating cash balances held at banks outside the United States are denominated in the local currency and are minor.

Many of our investments carry a degree of interest rate risk. When interest rates fall, our income from investments in variable-rate securities declines. When interest rates rise, the fair market value of our investments in fixed-rate securities declines. In addition, our investments in equity securities are subject to stock market volatility. Due in part to these factors, our future investment income may fall short of expectations or we may suffer losses in principal if forced to sell securities, which have seen a decline in market value due to changes in interest rates. We attempt to mitigate risk by holding fixed-rate securities to maturity, but, if our liquidity needs force us to sell fixed-rate securities prior to maturity, we may experience a loss of principal. We believe that a 10% fluctuation in interest rates would not have a material effect on our financial condition or results of operations.

Inflation. Although we cannot accurately determine the amounts attributable thereto, we have been affected by inflation through increased costs of employee compensation and other operational expenses. To the extent permitted by the marketplace for our products and services, we attempt to recover increases in costs by periodically increasing prices.

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ITEM 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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(a) Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for us. Internal control over financial reporting is a process designed by or under the supervision of our CEO and CFO, and effectively 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 U.S. 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 our transactions and dispositions of our assets;

Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations from 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, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. 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.

Our management, including our Principal Executive Officer (PEO) and President, assessed the effectiveness of our internal control over financial reporting as of April 30, 2018. In making this assessment, our management used the criteria set forth in *Internal Control - Integrated Framework (2013)* published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, our management, including our PEO and President, has concluded that our internal control over financial reporting was effective as of April 30, 2018.

KPMG LLP, our independent registered public accounting firm, has issued an attestation report on the effectiveness of our internal control over financial reporting as of April 30, 2018, and this attestation report follows immediately below.

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(b) Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors

American Software, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited American Software, Inc. and subsidiaries (the Company) internal control over financial reporting as of April 30, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of April 30, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of April 30, 2018 and 2017, the related consolidated statements of operations, shareholders' equity, and cash flows for each of the years in the three-year period ended April 30, 2018, and the related notes and financial statement schedule II (collectively, the consolidated financial statements), and our report dated July 13, 2018 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance

with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ KPMG LLP

Atlanta, Georgia

July 13, 2018

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(c) Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors

American Software, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of American Software, Inc. and subsidiaries (the Company) as of April 30, 2018 and 2017, the related consolidated statements of operations, shareholders' equity, and cash flows for each of the years in the three-year period ended April 30, 2018, and the related notes and financial statement schedule II (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of April 30, 2018 and 2017, and the results of their operations and their cash flows for each of the years in the three-year period ended April 30, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of April 30, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated July 13, 2018 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 1982.

Atlanta, Georgia

July 13, 2018

Table of Contents**American Software, Inc. and Subsidiaries****Consolidated Balance Sheets****April 30, 2018 and 2017****(in thousands, except share data)**

	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 52,794	\$ 66,001
Investments	26,121	19,332
Trade accounts receivable, less allowance for doubtful accounts of \$159 at April 30, 2018 and \$171 at April 30, 2017:		
Billed	18,643	17,060
Unbilled	3,375	2,811
Prepaid expenses and other current assets	6,592	4,322
Total current assets	107,525	109,526
Investments-noncurrent	8,893	4,455
Property and equipment, net	3,034	2,055
Capitalized software, net	9,728	8,614
Goodwill	25,888	19,549
Other intangibles, net	5,120	3,399
Other assets	2,777	1,176
Total assets	\$ 162,965	\$ 148,774
LIABILITIES AND SHAREHOLDERS EQUITY		
Current liabilities:		
Accounts payable	\$ 1,974	\$ 1,541
Accrued compensation and related costs	6,310	3,329
Dividends payable	3,367	3,259
Other current liabilities	1,246	5,171
Deferred revenue	33,226	29,437
Total current liabilities	46,123	42,737
Deferred income taxes	2,615	1,994
Long-term deferred revenue	147	214
Other long-term liabilities	1,496	79
Total liabilities	50,381	45,024
Shareholders' equity:		
Common stock:		
	3,314	3,182

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Class A, \$0.10 par value. Authorized 50,000,000 shares: Issued and outstanding 33,141,764 (28,553,132, net) shares at April 30, 2018 and 31,821,508 (27,232,876, net) shares at April 30, 2017		
Class B, \$0.10 par value. Authorized 10,000,000 shares: Issued and outstanding 2,057,390 shares at April 30, 2018 and 2,393,336 shares at April 30, 2017; convertible into Class A shares on a one-for-one basis		
	205	239
Additional paid-in capital	131,258	121,280
Retained earnings	3,366	4,608
Class A treasury stock, 4,588,632 shares at April 30, 2018 and 4,588,632 shares at April 30, 2017, at cost	(25,559)	(25,559)
Total shareholders' equity	112,584	103,750
Commitments and contingencies		
Total liabilities and shareholders' equity	\$ 162,965	\$ 148,774

See accompanying notes to consolidated financial statements.

Table of Contents**American Software, Inc. and Subsidiaries****Consolidated Statements of Operations****Years ended April 30, 2018, 2017, and 2016****(In thousands, except per share data)**

	2018	2017	2016
Revenues:			
License	\$ 15,344	\$ 15,584	\$ 22,043
Services and other	53,518	48,313	51,099
Maintenance	43,841	42,389	40,747
Total revenues	112,703	106,286	113,889
Cost of revenues:			
License	7,077	7,563	7,688
Services and other	33,597	33,814	37,100
Maintenance	9,326	9,707	9,441
Total cost of revenues	50,000	51,084	54,229
Gross margin	62,703	55,202	59,660
Research and development	11,877	11,889	11,248
Sales and marketing	20,658	20,287	22,164
General and administrative	16,057	14,219	12,449
Amortization of acquisition-related intangibles	580	1,041	272
Total operating expenses	49,172	47,436	46,133
Operating income	13,531	7,766	13,527
Other income:			
Interest income	1,575	1,257	1,346
Other, net	609	12,592	(173)
Earnings before income taxes	15,715	21,615	14,700
Income tax expense	3,662	6,994	4,458
Net earnings	\$ 12,053	\$ 14,621	\$ 10,242
Earnings per common share:(a)			
Basic	\$ 0.40	\$ 0.50	\$ 0.36
Diluted	\$ 0.40	\$ 0.49	\$ 0.35

Shares used in the calculation of earnings per common share:			
Basic	30,080	29,232	28,727
Diluted	30,472	29,567	29,005

- (a) Diluted per share amounts for Class A shares are shown above. Diluted per share for Class B shares under the two-class method are \$0.39, \$0.49 and \$0.35 for the years ended April 30, 2018, 2017 and 2016, respectively. See Note 1 to the Consolidated Financial Statements.

See accompanying notes to consolidated financial statements.

Table of Contents**American Software, Inc. and Subsidiaries****Consolidated Statements of Shareholders Equity****Years ended April 30, 2018, 2017, and 2016****(in thousands, except share data)**

	Common stock		Class B		Additional paid-in capital	Retained earnings	Treasury stock	Total shareholders equity
	Class A Shares	Amount	Shares	Amount				
Balance at April 30, 2015	30,566,099	\$ 3,057	2,587,086	\$ 259	\$ 110,829	\$ 4,159	\$ (25,378)	\$ 92,926
Proceeds from stock options exercised	306,848	30			1,788			1,818
Conversion of Class B shares into Class A shares	100,000	10	(100,000)	(10)				
Stock-based compensation					1,593			1,593
Net earnings						10,242		10,242
Dividends declared						(11,504)		(11,504)
Repurchase of common shares							(181)	(181)
Balance at April 30, 2016	30,972,947	3,097	2,487,086	249	114,210	2,897	(25,559)	94,894
Proceeds from stock options exercised	754,811	75			5,642			5,717
Conversion of Class B shares into Class A shares	93,750	10	(93,750)	(10)				
Stock-based compensation					1,428			1,428
Net earnings						14,621		14,621
Dividends declared						(12,910)		(12,910)
Balance at April 30, 2017	31,821,508	3,182	2,393,336	239	121,280	4,608	(25,559)	103,750
Proceeds from stock options exercised	984,310	98			8,511			8,609
Conversion of Class B shares into	335,946	34	(335,946)	(34)				

Class A shares		
Stock-based compensation	1,467	1,467
Net earnings	12,053	12,053
Dividends declared	(13,295)	(13,295)

Balance at April 30, 2018 33,141,764 \$ 3,314 2,057,390 \$ 205 \$ 131,258 \$ 3,366 \$ (25,559) \$ 112,584

See accompanying notes to consolidated financial statements.

Table of Contents**American Software, Inc. and Subsidiaries****Consolidated Statements of Cash Flows****Years ended April 30, 2018, 2017, and 2016****(In thousands)**

	2018	2017	2016
Cash flows from operating activities:			
Net earnings	\$ 12,053	\$ 14,621	\$ 10,242
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	6,030	6,640	5,618
Stock-based compensation expense	1,467	1,428	1,593
Accretion of liability from purchase of business			11
Net (gain)/loss on investments	(254)	(146)	994
Net (gain) on sale of fixed assets		(11,776)	
Deferred income tax expense/(benefit)	621	675	(312)
Changes in operating assets and liabilities, net of effects of acquisition:			
Purchases of trading securities	(24,541)	(10,267)	(13,206)
Proceeds from sales and maturities of trading securities	13,568	15,507	14,071
Accounts receivable, net	(1,774)	1,187	(945)
Prepaid expenses and other assets	(1,983)	(284)	(740)
Accounts payable and other liabilities	(1,807)	1,185	1,155
Deferred revenue	3,374	1,010	(190)
Net cash provided by operating activities	6,754	19,780	18,291
Cash flows from investing activities:			
Capitalized computer software development costs	(4,804)	(3,724)	(3,246)
Purchases of property and equipment, net of disposals	(1,428)	(731)	(655)
Proceeds from sale of building		13,134	
Purchase of business, net of cash acquired	(9,150)	(4,441)	
Net cash (used in) provided by investing activities	(15,382)	4,238	(3,901)
Cash flows from financing activities:			
Repurchase of common stock			(181)
Proceeds from exercise of stock options	8,609	5,717	1,818
Payment for accrued acquisition consideration		(200)	(200)
Dividends paid	(13,188)	(12,538)	(11,478)
Net cash used in financing activities	(4,579)	(7,021)	(10,041)
Net change in cash and cash equivalents	(13,207)	16,997	4,349

Cash and cash equivalents at beginning of year	66,001	49,004	44,655
Cash and cash equivalents at end of year	\$ 52,794	\$ 66,001	\$ 49,004
Supplemental disclosures of cash paid during the year for:			
Income taxes	\$ 7,892	\$ 2,924	\$ 4,800
Supplemental disclosures of noncash operating, investing and financing activities:			
Accrual of dividends payable	\$ 3,367	\$ 3,259	\$ 2,887

See accompanying notes to consolidated financial statements.

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American Software, Inc. and Subsidiaries

Notes to Consolidated Financial Statements

April 30, 2018, 2017, and 2016

(1) Presentation and Summary of Significant Accounting Policies

(a) Basis of Presentation

Founded in 1970 and headquartered in Atlanta, Georgia, American Software, Inc. and its subsidiaries (collectively, the Company) are engaged in the development, marketing, and support activities of a broad range of computer business application software products. The Company's operations are principally in the computer software industry, and its products and services are used by customers within the United States and certain international markets. We provide our software solutions through three major business segments, which are further broken down into a total of six major product and service groups. The three operating segments are (1) Supply Chain Management (SCM), (2) Information Technology (IT) Consulting and (3) Other.

The SCM segment consists of Logility, Inc. (see Note 9), which provides collaborative supply chain solutions to streamline and optimize the production, distribution and management of products between trading partners, as well as wholly-owned subsidiaries of Logility, DMI, NGC and Halo.

The IT Consulting segment consists of The Proven Method, Inc., an IT staffing and consulting services firm.

The Other segment consists of (i) American Software ERP, which provides purchasing and materials management, customer order processing, financial, e-commerce and traditional manufacturing solutions, and (ii) unallocated corporate overhead expenses.

Certain prior period amounts have been recasted to conform within these footnotes to current period presentation.

(b) Principles of Consolidation

The consolidated financial statements include the accounts of American Software, Inc. and its wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

(c) Revenue Recognition and Deferred Revenue

The Company recognizes revenue predominately in accordance with the Software Revenue Recognition Topic of the Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC).

License. License revenue in connection with license agreements for standard proprietary software is recognized upon delivery of the software, provided collection is considered probable, the fee is fixed or determinable, there is persuasive evidence of an arrangement, and vendor-specific objective evidence (VSOE) exists with respect to any undelivered elements of the arrangement. For multiple-element arrangements, the Company recognizes revenue under the residual method, whereby (1) the total fair value of the undelivered elements, as indicated by VSOE, is deferred

and subsequently recognized and (2) the difference between the total arrangement fee and the amount deferred for the undelivered elements is recognized as revenue related to the delivered elements. We record revenues from sales of third-party products in accordance with Principal Agent Considerations within the Revenue Recognition Topic of the FASB Accounting Standards Codification. Furthermore, we evaluate sales through our indirect channel on a case-by-case basis to determine whether the transaction should be recorded gross or net, including but not limited to assessing whether or not the Company (1) acts as principal in the transaction, (2) takes title to the products, (3) has risks and rewards of ownership, such as the risk of loss for collection, delivery, or returns, and (4) acts as an agent or broker with compensation on a commission or fee basis. Accordingly, in most cases we record our sales through the DMI channel on a gross basis.

Services and other. Revenue derived from services primarily includes consulting, implementation, and training. Fees are primarily billed under time and materials arrangements and are recognized as services are performed. In accordance with the other presentation matters within the Revenue Recognition Topic of the FASB Accounting Standards Codification, the Company recognizes amounts received for reimbursement of travel and other out-of-pocket expenses incurred as revenue in the consolidated statements of operations under services and other. Reimbursements received from customers for out-of-pocket expenses were recorded in revenues and totaled approximately \$1.9 million, \$2.1 million, and \$2.4 million for 2018, 2017 and 2016, respectively.

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Software-as-a-Service (SaaS) revenues include fees for the right to use the software for a limited period of time in a hosted environment by the Company or by a third-party and the customer accesses and uses the software on an as-needed basis over the Internet or via a dedicated line; however, the customer has no ability to take delivery of the software. The underlying arrangements typically include a single fee for the service that is billed monthly, quarterly or annually. SaaS revenues are recognized ratably over the subscription (which is included in Services Revenue) over the committed services period once the services commence.

Maintenance. Revenue derived from maintenance contracts primarily includes telephone consulting, product updates, and releases of new versions of products previously purchased by the customer, as well as error reporting and correction services. Maintenance contracts are typically sold for a separate fee with initial contractual periods ranging from one to three years with renewal for additional periods thereafter. Maintenance fees are generally billed annually in advance. Maintenance revenue is recognized ratably over the term of the maintenance agreement. In situations where all or a portion of the maintenance fee is bundled with the license fee, revenue/VSOE for maintenance is determined based on prices when sold separately.

Indirect Channel Revenue. We recognize revenues for sales made through indirect channels principally when the distributor makes the sale to an end-user, when the license fee is fixed or determinable, the license fee is nonrefundable, and the sale meets all other conditions for revenue recognition.

Deferred Revenue. Deferred revenue represents advance payments or billings for software licenses, services, and maintenance billed in advance of the time revenue is recognized.

Sales Taxes. We account for sales taxes collected from customers on a net basis.

Unbilled Accounts Receivable. The unbilled receivable balance consists of amounts generated from license fee and services revenues. At April 30, 2018 and 2017, unbilled license fees were approximately \$0.8 million and \$1.0 million, respectively, and unbilled services revenues were approximately \$2.5 million and \$1.8 million, respectively. Unbilled license fee accounts receivable represents revenue that has been recognized but under the terms of the license agreement, which include specified payment terms that are considered normal and customary, certain payments have not yet been invoiced to the customers. Unbilled services revenues primarily occur due to the timing of the respective billings, which occur subsequent to the end of each reporting period.

(d) Cost of Revenues

Cost of revenues for licenses includes amortization of developed technology and capitalized computer software development costs, salaries and benefits and value-added reseller (VAR) commissions. Costs for maintenance and services revenues include the cost of personnel to conduct implementations, customer support and consulting, and other personnel-related expenses as well as agent commission expenses related to maintenance revenues generated by the indirect channel. Commission costs for maintenance are deferred and amortized over the related maintenance term.

(e) Cash Equivalents

Cash equivalents of \$47.0 million and \$62.6 million at April 30, 2018 and 2017, respectively, consist of overnight repurchase agreements and money market deposit accounts. The Company considers all such investments with original maturities of three months or less to be cash equivalents for purposes of the consolidated statements of cash flows.

(f) Concentrations of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and cash equivalents, short- and long-term investments and accounts receivable. The Company maintains cash and cash equivalents and short- and long-term investments with various financial institutions. The Company's sales are primarily to companies located in North America and Europe. The Company performs periodic credit evaluations of its customers' financial condition and does not require collateral. Accounts receivable are due principally from companies under stated contract terms.

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The Company has not experienced significant returns or warranty claims to date and, as a result, the allowance for the cost of returns and product warranty claims at April 30, 2018 or 2017 is not significant.

The Company records an allowance for doubtful accounts based on the historical experience of write-offs and a detailed assessment of accounts receivable. The total amounts of expense/(recovery) to operations were approximately \$24,000, \$39,000, and \$0 for 2018, 2017, and 2016, respectively, which are included in general and administrative expenses in the accompanying consolidated statements of operations. In estimating the allowance for doubtful accounts, management considers the age of the accounts receivable, the Company's historical write-offs, and the credit worthiness of the customer, among other factors. Should any of these factors change, the estimates made by management will also change accordingly, which could affect the level of the Company's future provision for doubtful accounts. Uncollectible accounts are written off when it is determined that the specific balance is not collectible.

(h) Investments

Investments consist of commercial paper, corporate bonds, government securities, certificates of deposits and marketable equity securities. The Company accounts for its investments in accordance with the Investments Debt and Equity Securities Topic of the FASB ASC. The Company has classified its investment portfolio as trading. Trading securities are bought and held principally for the purpose of selling them in the near term and are recorded at fair value. Unrealized gains and losses on trading securities are included in the determination of net earnings. For the purposes of computing realized gains and losses, cost is identified on a specific identification basis. Investments with maturities less than one year as of the balance sheet date are classified as short-term investments and those that mature greater than one year are classified as long-term investments.

(i) Property and Equipment

Property and equipment are recorded at cost, less accumulated depreciation and amortization. Depreciation of buildings, computer equipment, purchased computer software, office furniture and equipment is calculated using the straight-line method based upon the estimated useful lives of the assets (three years for computer equipment and software, seven years for office furniture and equipment and thirty years for buildings). Leasehold improvements are amortized using the straight-line method over the estimated useful lives of the assets or the related lease term, whichever is shorter. Depreciation and amortization expense on buildings, furniture, equipment and purchased computer software was \$492,000, \$731,000, and \$807,000 in 2018, 2017 and 2016, respectively.

(j) Capitalized Computer Software Development Costs

The Company capitalizes certain computer software development costs in accordance with the FASB ASC Costs of Software to be Sold, Leased or Marketed Topic. Costs incurred internally to create a computer software product or to develop an enhancement to an existing product are charged to expense when incurred as research and development expense until technological feasibility for the respective product is established. Thereafter, software development costs are capitalized and reported at the lower of unamortized cost or net realizable value. Capitalization ceases when the product or enhancement is available for general release to customers. The Company makes ongoing evaluations of the recoverability of its capitalized software projects by comparing the net amount capitalized for each product to the estimated net realizable value of the product. If such evaluations indicate that the unamortized software development costs exceed the net realizable value, the Company writes off the amount by which the unamortized software development costs exceed net realizable value. Capitalized computer software development costs are amortized ratably based on the projected revenues associated with the related software or on a straight-line basis over three

years, whichever method results in a higher level of amortization. Amortization of capitalized computer software development costs is included in the cost of license revenues in the consolidated statements of operations.

Total Expenditures and Amortization. Total expenditures for capitalized computer software development costs, total research and development expense, and total amortization of capitalized computer software development costs are as follows:

	Years ended April 30,		
	2018	2017	2016
	(in thousands)		
Total capitalized computer software development costs	\$ 4,804	\$ 3,724	\$ 3,246
Total research and development expense	11,877	11,889	11,248
Total research and development expense and capitalized computer software-development costs	\$ 16,681	\$ 15,613	\$ 14,494
Total amortization of capitalized computer software development costs	\$ 3,690	\$ 4,250	\$ 3,921

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Capitalized computer software development costs consist of the following at April 30, 2018 and 2017 (in thousands):

	2018	2017
Capitalized computer software development costs	\$ 33,841	\$ 29,037
Accumulated amortization	(24,113)	(20,423)
	\$ 9,728	\$ 8,614

Of the Company's capitalized software projects that are currently completed and being amortized, the Company expects amortization expense for the next three years to be as follows (in thousands):

2019	\$ 3,820
2020	3,125
2021	469
	\$ 7,414

(k) Acquisition-Related Intangible Assets (exclusive of Logility's treasury stock repurchases)

Acquisition-related intangible assets are stated at historical cost and include acquired software and certain other intangible assets with definite lives. The intangible assets are being amortized over a period ranging from one to eight years. For 2018, total amortization expense related to acquisition-related intangible assets was approximately \$1,849,000, with \$580,000 included in operating expense and \$1,269,000 included in cost of license fees in the accompanying consolidated statements of operations. For 2017, total amortization expense related to acquisition-related intangible assets was approximately \$1,659,000, with \$1,041,000 included in operating expense and \$618,000 included in cost of license fees in the accompanying consolidated statements of operations. For 2016, total amortization expense related to acquisition-related intangible assets was approximately \$890,000, with \$272,000 included in operating expense and \$618,000 included in cost of license fees in the accompanying consolidated statements of operations.

Acquisition-Related Intangible Assets consist of the following at April 30, 2018 and 2017 (in thousands):

	Weighted Average Amortization in Years	2018	2017
Current technology	3	\$ 6,000	\$ 4,872
Customer relationships	8	1,700	1,400
Non-compete	3	100	390
Trademarks	3	340	200
		8,140	6,862

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Accumulated amortization	(3,020)	(3,463)
	\$ 5,120	\$ 3,399

The Company expects amortization expense for the next five years to be as follows based on intangible assets as of April 30, 2018 (in thousands):

2019	\$ 2,388
2020	1,600
2021	772
2022	213
2023	52
Thereafter	95
	\$ 5,120

Table of Contents***(1) Goodwill and Other Intangibles***

Goodwill represents the excess of costs over fair value of assets of businesses acquired. Goodwill and intangible assets acquired in a purchase business combination and determined to have an indefinite useful life are not amortized, but instead are tested for impairment at least annually in accordance with the Intangibles-Goodwill and Other Topic of the FASB ASC. The Company evaluates the carrying value of goodwill annually and between annual evaluations if events occur or circumstances change that would more likely than not reduce the fair value of the reporting unit below its carrying amount. Such circumstances could include, but are not limited to, (1) a significant adverse change in legal factors or in business climate, (2) unanticipated competition, or (3) an adverse action or assessment by a regulator.

When evaluating whether the goodwill is impaired, the Company compares the fair value of the reporting unit to which the goodwill is assigned to its carrying amount, including goodwill. The Company identifies the reporting unit on a basis that is similar to its method for identifying operating segments as defined by the Segment Reporting Topic of the FASB ASC. If the carrying amount of a reporting unit exceeds its fair value, then the amount of the impairment loss must be measured. This evaluation is applied annually on each impairment testing date (April 30) unless there is a triggering event present during an interim period.

For the years ended April 30, 2018 and 2017, the Company performed a qualitative assessment based on economic, industry and company-specific factors as the initial step in the annual goodwill impairment test for all reporting units. Based on the results of the qualitative assessment, companies are only required to perform Step 1 of the annual impairment test for a reporting unit if the company concludes that it is more likely than not that the unit's fair value is less than its carrying amount. To the extent the Company concludes it is more likely than not that a reporting unit's estimated fair value is less than its carrying amount, the two-step approach is applied. The first step would require a comparison of each reporting unit's fair value to the respective carrying value. If the carrying value exceeds the fair value, a second step is performed to measure the amount of impairment loss, if any. The Company did not identify any macroeconomic or industry conditions as of April 30, 2018, that would indicate the fair value of the reporting units were more likely than not to be less than their respective carrying values. If circumstances change or events occur to indicate it is more likely than not that the fair value of any reporting units have fallen below their carrying value, the Company would test such reporting unit for impairment.

Intangible assets with estimable useful lives are required to be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with the Property, Plant, and Equipment Topic of the FASB ASC.

Goodwill consisted of the following by segment (in thousands):

	Supply Chain Management*	IT Consulting	Other	Total
Balance at April 30, 2016	\$ 18,749	\$	\$	\$ 18,749
Goodwill related to the AdapChain Acquisition	800			800
Balance at April 30, 2017	19,549			19,549
Goodwill related to the Halo Acquisition	6,339			6,339

Balance at April 30, 2018	\$	25,888	\$	\$	\$ 25,888
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* Goodwill related to Logility, Inc., New Generation Computing, Inc., Demand Management, Inc. and their acquisitions.

Intangible Assets (including Acquisition-Related Intangible Assets) consisted of the following by segment (in thousands):

	Supply Chain Management	IT Consulting	Other	Total
Balance at April 30, 2016	\$ 1,858	\$	\$	\$ 1,858
Intangibles related to the AdapChain Acquisition	3,200			3,200
Amortization expense	(1,659)			(1,659)
Balance at April 30, 2017	3,399			3,399
Intangibles related to the Halo Acquisition	3,570			3,570
Amortization expense	(1,849)			(1,849)
Balance at April 30, 2018	\$ 5,120	\$	\$	\$ 5,120

Table of Contents***(m) Income Taxes***

The Company accounts for income taxes using the asset and liability method. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

(n) Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which replaces the existing revenue recognition guidance. The new standard requires companies to recognize revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. The new standard also requires enhanced disclosures about revenue recognition. The new guidance is effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period. The new revenue standard permits two methods of adoption: a full retrospective approach reflecting the application of the standard in each prior reporting period presented, or a modified retrospective approach with the cumulative effect of applying the standard recognized at the date of adoption.

The Company adopted the new revenue standard effective May 1, 2018 using the modified retrospective transition method. Under this method, the Company elects to apply the cumulative effect method to contracts that are not complete as of the adoption date. The Company's total revenue impact is expected to be approximately \$1.2 million, with approximately 70% impacting the fiscal year ending April 30, 2019, which is the result of upfront recognition of revenue under the new standard for term licenses and certain perpetual license contracts that were previously recognized over time due to the lack of VSOE for the undelivered element. In addition, under the new standard, the Company will capitalize a portion of sales commission expenses and recognize them ratably over the associated period of economic benefit. As a result, the cumulative impact due to the adoption of the new revenue standard on the opening consolidated balance sheet is expected to be an increase in opening retained earnings, with a corresponding increase to contract assets and a decrease in deferred revenue. We have not identified other significant differences related to the pattern of revenue recognition or presentation of revenue compared to our historical accounting. The Company is continuing to finalize the impact of adopting the new revenue standard on its financial position but has identified changes to its accounting policies and practices and controls to support the new revenue recognition standard.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The ASU is effective for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption of the update is permitted. The Company is evaluating the impact of the adoption of this update on our consolidated financial statements and related disclosures.

(o) Use of Estimates

The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosures of contingent assets and liabilities, at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting

period. On an ongoing basis, we evaluate our estimates, including, but not limited to those related to revenue/collectability, income taxes, allocation of fair values in acquisitions and business combinations. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which, form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results could differ materially from these estimates under different assumptions or conditions.

(p) Stock-Based Compensation

The Company has four stock-based employee compensation plans under which options to purchase common stock of the Company were outstanding as of April 30, 2018. Those plans are described more fully in Note 7. In addition to two American Software plans, effective July 9, 2009, the Company adopted the Logility, Inc. 1997 Stock Plan and Logility, Inc. 2007 Stock Plan as equity plans of the Company in conjunction with the Company's acquisition of the shares of Logility common stock it did not previously own.

The Company recorded stock option compensation cost of approximately \$1,467,000, \$1,428,000 and \$1,593,000 and related income tax benefits of approximately \$547,000, \$528,000 and \$586,000 for the years ended April 30, 2018, 2017 and 2016, respectively. Stock-based compensation expense on current year grants is recorded on a straight-line basis over the vesting period for the entire award directly to additional paid-in capital.

The Company adopted ASU No. 2016-09, *Compensation - Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, in fiscal 2016. Under the new guidance, companies will no longer record excess tax benefits and certain tax deficiencies in additional paid-in capital. Instead, all excess tax benefits and tax deficiencies should be recognized as income tax expense or benefit in the income statement, and additional paid-in capital pools will be eliminated. The guidance requires companies to present excess tax benefits as an operating activity on the statement of cash flows rather than as a financing activity.

(q) Comprehensive Income

The Comprehensive Income Topic of the FASB ASC establishes standards for reporting and presentation of comprehensive income and its components in a full set of financial statements.

The Company did not have any other comprehensive income items for 2018, 2017, or 2016.

(r) Impairment of Long-Lived Assets

The Company reviews long-lived assets, such as property, and equipment, and purchased intangibles subject to amortization, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of by sale would be separately presented in the consolidated balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. The assets and liabilities of a group classified as held for sale would be presented separately in the appropriate asset and liability sections of the consolidated balance sheet.

Table of Contents**(s) Earnings per Common Share**

The Company has two classes of common stock of which Class B common shares are convertible into Class A common shares at any time, on a one-for-one basis. Under the Company's Articles of Incorporation, if dividends are declared, holders of Class A common shares shall receive a \$.05 dividend per share prior to the Class B common shares receiving any dividend and holders of Class A common shares shall receive a dividend at least equal to Class B common shares dividends on a per share basis. As a result, the Company has computed the earnings per share in compliance with the Earnings Per Share Topic of the FASB ASC, which requires companies that have multiple classes of equity securities to use the two-class method in computing earnings per share.

For the Company's basic earnings per share calculation, the Company uses the two-class method. Basic earnings per share are calculated by dividing net earnings attributable to each class of common stock by the weighted average number of shares outstanding. All undistributed earnings are allocated evenly between Class A and B common shares in the earnings per share calculation to the extent that earnings equal or exceed \$.05 per share. This allocation is based on management's judgment after considering the dividend rights of the two-classes of common stock, the control of the Class B shareholders and the convertibility rights of the Class B shares to Class A shares. If Class B shares convert to Class A shares during the period, the distributed net earnings for Class B shares is calculated using the weighted average common shares outstanding during the period.

Diluted earnings per share is calculated similarly to basic earnings per share, except that the calculation includes the dilutive effect of the assumed exercise of options issuable under the Company's stock incentive plans. For the Company's diluted earnings per share calculation for Class A shares, the Company uses the if-converted method. This calculation assumes that all Class B common shares are converted into Class A common shares and, as a result, assumes there are no holders of Class B common shares to participate in undistributed earnings.

For the Company's diluted earnings per share calculation for Class B shares, the Company uses the two-class method. This calculation does not assume that all Class B common shares are converted into Class A common shares. In addition, this method assumes the dilutive effect of Class A stock options were converted to Class A shares and the undistributed earnings are allocated evenly to both Class A and B shares including Class A shares issued pursuant to those converted stock options. This allocation is based on management's judgment after considering the dividend rights of the two-classes of common stock, the control of the Class B shareholders and the convertibility rights of the Class B shares into Class A shares.

The following tables set forth the computation of basic earnings per common share and diluted earnings per common share (in thousands except for per share amounts), see Note 7 for total stock options outstanding and potentially dilutive:

Basic earnings per common share:

	Year Ended April 30, 2018		Year Ended April 30, 2017		Year Ended April 30, 2016	
	Class A	Class B	Class A	Class B	Class A	Class B
Distributed earnings per share	\$ 0.44	\$ 0.43	\$ 0.44	\$ 0.44	\$ 0.40	\$ 0.40
Undistributed earnings/(loss) per share	(0.04)	(0.04)	0.06	0.06	(0.04)	(0.04)
Total per share	\$ 0.40	\$ 0.39	\$ 0.50	\$ 0.50	\$ 0.36	\$ 0.36

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Distributed earnings	\$ 12,321	\$ 974	\$ 11,845	\$ 1,066	\$ 10,479	\$ 1,025
Undistributed earnings/(loss)	(1,151)	(91)	1,568	142	(1,148)	(114)
Total	\$ 11,170	\$ 883	\$ 13,413	\$ 1,208	\$ 9,331	\$ 911
Basic weighted average common shares	27,805	2,275	26,793	2,439	26,143	2,584

Table of Contents**Diluted EPS for Class A common shares using the If-Converted Method****Year Ended April 30, 2018**

	Undistributed and distributed earnings to Class A Common	Class A Common Shares	EPS*
Per basic	\$ 11,170	27,805	\$ 0.40
Common stock equivalents		392	
	11,170	28,197	0.40
Class B conversion	883	2,275	
Diluted EPS for Class A	\$ 12,053	30,472	\$ 0.40

Year Ended April 30, 2017

	Undistributed and distributed earnings to Class A Common	Class A Common Shares	EPS*
Per basic	\$ 13,413	26,793	\$ 0.50
Common stock equivalents		335	
	13,413	27,128	0.49
Class B conversion	1,208	2,439	
Diluted EPS for Class A	\$ 14,621	29,567	\$ 0.49

Year Ended April 30, 2016

	Undistributed and distributed earnings to Class A Common	Class A Common Shares	EPS*
Per basic	\$ 9,331	26,143	\$ 0.36
Common stock equivalents		278	
	9,331	26,421	0.35
Class B conversion	911	2,584	

Diluted EPS for Class A	\$	10,242	29,005	\$ 0.35
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Table of Contents**Diluted EPS for Class B common shares using the Two-Class Method****Year Ended April 30, 2018**

	Undistributed and distributed earnings to Class B Common	Class B Common Shares	EPS*
Per basic	\$ 883	2,275	\$ 0.39
Reallocation of undistributed earnings from Class A shares to Class B shares			
Diluted EPS for Class B	\$ 883	2,275	\$ 0.39

Year Ended April 30, 2017

	Undistributed and distributed earnings to Class B Common	Class B Common Shares	EPS*
Per basic	\$ 1,208	2,439	\$ 0.50
Reallocation of undistributed earnings from Class A shares to Class B shares	(2)		
Diluted EPS for Class B	\$ 1,206	2,439	\$ 0.49

Year Ended April 30, 2016

	Undistributed and distributed earnings to Class B Common	Class B Common Shares	EPS*
Per basic	\$ 911	2,584	\$ 0.35
Reallocation of undistributed earnings from Class A shares to Class B shares	2		
Diluted EPS for Class B	\$ 913	2,584	\$ 0.35

* Amounts adjusted for rounding

(t) Advertising

All advertising costs are expensed as incurred. Advertising expenses, which are included within sales and marketing expenses, were \$2.4 million, \$2.3 million and \$2.1 million in fiscal 2018, 2017 and 2016, respectively.

(u) Guarantees and Indemnifications

The Company accounts for guarantees in accordance with the Guarantee Topic of the FASB ASC. The Company's sales agreements with customers generally contain infringement indemnity provisions. Under these agreements, the Company agrees to indemnify, defend and hold harmless the customer in connection with patent, copyright or trade secret infringement claims made by third-parties with respect to the customer's authorized use of the Company's products and services. The indemnity provisions generally provide for the Company's control of defense and settlement and cover costs and damages finally awarded against the customer, as well as the Company's modification of the product so it is no longer infringing or, if it cannot be corrected, return of the product for a refund. The sales agreements with customers sometimes also contain indemnity provisions for death, personal injury or property damage caused by the Company's personnel or contractors in the course of performing services to customers. Under these agreements, the Company agrees to indemnify, defend and hold harmless the customer in connection with death, personal injury and property damage claims made by third parties with respect to actions of the Company's personnel or contractors. The indemnity

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provisions generally provide for the Company's control of defense and settlement and cover costs and damages finally awarded against the customer. The indemnity obligations contained in sales agreements generally have a limited life and monetary award. The Company has not previously incurred costs to settle claims or pay awards under these indemnification obligations. The Company accounts for these indemnity obligations in accordance with the Contingencies Topic of the FASB ASC, and records a liability for these obligations when a loss is probable and reasonably estimable. The Company has not recorded any liabilities for these agreements as of April 30, 2018 or 2017.

The Company warrants to its customers that its software products will perform in all material respects in accordance with the standard published specifications in effect at the time of delivery of the licensed products to the customer generally for 90 days after delivery of the licensed products. Additionally, the Company warrants to its customers that services will be performed consistent with generally accepted industry standards or specific service levels through completion of the agreed upon services. If necessary, the Company will provide for the estimated cost of product and service warranties based on specific warranty claims and claim history. However, the Company has not incurred significant recurring expense under product or service warranties. Accordingly, the Company has no liabilities recorded for these agreements as of April 30, 2018 or 2017.

(v) Industry Segments

The Company operates and manages its business in three reportable segments. See Note 9 of the Consolidated Financial Statements.

(2) Investments

Investments consist of the following (in thousands):

	April 30,	
	2018	2017
Trading:		
Debt securities Tax-exempt state and municipal bonds	\$ 23,889	\$ 14,803
Marketable equity securities	11,125	8,984
	\$ 35,014	\$ 23,787

The total carrying value of all investments on a consolidated basis was approximately \$35,014,000 and \$23,787,000 at April 30, 2018 and 2017, respectively. At April 30, 2018, there were approximately \$8,893,000 in trading investments included in investments-noncurrent in the accompanying consolidated balance sheet. At April 30, 2017, there were approximately \$4,435,000 in trading investments included in investments-noncurrent in the accompanying consolidated balance sheet.

The contractual maturities of debt securities classified as trading at April 30, 2018 and 2017 were as follows (in thousands):

	2018	2017
Due within one year	\$ 14,996	\$ 10,368

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Due within two years	8,893	4,435
Due within three years		
Due after three years		
	\$ 23,889	\$ 14,803

In 2018, 2017 and 2016, the Company's investment portfolio of trading securities experienced net unrealized holding gains of approximately \$907,000, and \$1.3 million and losses of \$110,000, respectively, which have been included in other income, net in the accompanying consolidated statements of operations. In 2018, 2017 and 2016, the Company's investment portfolio of trading securities experienced net realized holding losses of approximately \$653,000, \$937,000 and \$878,000, respectively.

Table of Contents**(3) Fair Value of Financial Instruments**

The Company measures its investments based on a fair value hierarchy disclosure framework that prioritizes and ranks the level of market price observability used in measuring assets and liabilities at fair value. A number of factors affect market price observability including the type of asset or liability and its characteristics. This hierarchy prioritizes the inputs into three broad levels as follows:

Level 1 Quoted prices in active markets for identical instruments.

Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.

Level 3 Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

The following is a general description of the valuation methodologies used for financial assets and liabilities measured at fair value, including the general classification of such assets and liabilities pursuant to the valuation hierarchy.

Cash Equivalents Cash equivalents include investments in government obligation based money-market funds, other money market instruments and interest-bearing deposits with initial or remaining terms of three months or less. The fair value of cash equivalents approximates its carrying value due to the short-term nature of these instruments.

Marketable Securities Marketable securities utilizing Level 1 inputs include active exchange-traded equity securities and equity index funds, and most U.S. Government debt securities, as these securities all have quoted prices in active markets. Marketable securities utilizing Level 2 inputs include municipal bonds. We value these securities using market-corroborated pricing or other models that use observable inputs such as yield curves.

The following table presents our assets that we measured at fair value on a recurring basis and indicates the fair value hierarchy of the valuation techniques we utilized to determine such fair value (in thousands):

	April 30, 2018				April 30, 2017				
	Quoted Prices in Active Markets for Identical (Level 1)		Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total	Quoted Prices in Active Markets for Identical (Level 1)		Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash equivalents	\$ 46,972	\$	\$	\$ 46,972	\$ 62,647	\$	\$	\$	\$ 62,647
Marketable securities	11,125	23,889		35,014	8,984	14,803			23,787
Total	\$ 58,097	\$ 23,889	\$	\$ 81,986	\$ 71,631	\$ 14,803	\$	\$	\$ 86,434

The carrying amounts of cash, trade accounts receivable and unbilled accounts receivable, accounts payable, accrued compensation and related costs, and other current liabilities approximate fair value because of their short-term maturities.

(4) Property and Equipment

Property and equipment consisted of the following at April 30, 2018 and 2017 (in thousands):

	2018	2017
Buildings and leasehold improvements	\$ 15,325	\$ 14,704
Computer equipment and purchased software	11,692	10,886
Office furniture and equipment	4,661	4,618
	31,678	30,208
Accumulated depreciation and amortization	(28,644)	(28,153)
	\$ 3,034	\$ 2,055

Table of Contents**(5) Acquisitions**

We account for business combinations using the acquisition method of accounting and accordingly, the identifiable assets acquired and liabilities assumed are recorded based upon management's estimates of current fair values as of the acquisition date. The estimation process includes analyses based on income and market approaches. Goodwill represents the excess purchase price over the fair value of net assets, including the amount assigned to identifiable intangible assets. The goodwill generated is due in part to the synergies that are not included in the fair value of identifiable intangible assets. Goodwill recorded in an acquisition is assigned to applicable reporting units based on expected revenues. Identifiable intangible assets with finite lives are amortized over their useful lives. Amortization of current technology is recorded in cost of revenues-license and amortization of all other intangible assets is recorded in amortization of acquisition-related intangibles. Acquisition-related costs, including advisory, legal, accounting, valuation and other costs, are expensed in general and administrative expenses in the periods in which such costs are incurred. The results of operations of acquired businesses are included in the condensed consolidated financial statements from the acquisition date.

Effective November 21, 2017, the Company acquired certain assets of privately held Innovare Holding Co., Incorporated, a Delaware corporation and its subsidiaries (collectively, Halo) and a supplier of advanced analytics and business intelligence solutions, for the supply chain market, pursuant to the terms of an asset purchase agreement, dated as of November 21, 2017 (the Purchase Agreement).

Halo's advanced analytics will be embedded into the Logility Voyager Solutions advanced analytics platform. These enriched analytics will leverage interactive visualization, machine learning algorithms, and artificial intelligence (AI) to transform both structured and unstructured data to accelerate business planning performance and proactively identify new business opportunities or mitigate risks. Customers on the DMI and NGC platforms will be able to add pre-packaged Halo advanced analytics capabilities to their subscriptions to drive quick insights and appropriate actions for their businesses. In addition, Logility will continue to offer Halo standalone to complement other enterprise systems.

Under the terms of the Purchase Agreement, the Company acquired the assets of Halo for cash consideration paid of approximately \$9.25 million, which represents a purchase price of approximately \$9.95 million net of a \$700,000 negative working capital adjustment, subject to certain post-closing adjustments, which included an additional negative working capital adjustment of \$100,000, thus resulting in an adjusted purchase price consolidation of \$9.15 million. The Company incurred acquisition costs of approximately \$149,000 during the year ended April 30, 2018. The operating results of Halo are not material for pro forma disclosure. We preliminarily allocated \$6,339,000 of the total purchase price to goodwill, which has been assigned to the Supply Chain Management segment and is deductible for income tax purposes.

The following preliminary allocation of the total purchase price reflects the fair value of the assets acquired and liabilities assumed as of November 21, 2017 (in thousands):

	Useful Life
Accounts receivable, net	\$ 373
Current assets	188
Property and equipment, net	43
Other assets	1,700
Goodwill	6,339

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Non-compete	30	2 years
Trade name	140	2 years
Customer relationships	300	8 years
Current technology	3,100	3 years
Total assets acquired	12,213	
Current liabilities	(1,360)	
Long-term liabilities	(1,703)	
Total liabilities assumed	(3,063)	
Net assets acquired	\$ 9,150	

Non-compete agreements, trade name, customer relationships and current technology are being amortized on a straight-line basis over the remaining estimated economic life of the assets, including the period being reported. The fair value of deferred revenues in a business combination is considered to be an assumed liability (which must arise from a legal performance obligation) and,

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accordingly, is estimated based on the direct cost of fulfilling the obligation plus a normal profit margin, which approximates fair

value. Also, in practice, the normal profit margin is limited to the profit margin on the costs to provide the product or service (that is, the fulfillment effort).

6) Income Taxes

Income tax expense consisted of the following:

	Years ended April 30,		
	2018	2017	2016
	(In thousands)		
Current:			
Federal	\$ 2,298	\$ 5,643	\$ 4,105
State	743	676	665
	3,041	6,319	4,770
Deferred:			
Federal	321	558	(299)
State	300	117	(13)
	621	675	(312)
	\$ 3,662	\$ 6,994	\$ 4,458

The Company's actual income tax expense differs from the expected income tax expense calculated by applying our blended U.S. Federal statutory tax rate of 30.3% for fiscal year 2018 and the Federal statutory rate of 35% for fiscal years 2017 and 2016, to earnings before income taxes as follows:

	Years ended April 30,		
	2018	2017	2016
	(In thousands)		
Computed expected income tax expense	\$ 4,763	\$ 7,565	\$ 5,145
Increase (decrease) in income taxes resulting from:			
State income taxes, net of federal income tax effect	891	592	435
Research and development credits	(493)	(520)	(694)
Change in valuation allowance for deferred tax assets	4	(293)	(2)
Tax contingencies	(13)	(42)	(13)
NQ stock options granted	102	106	26
Rate change tax reform	(1,206)		
Other, net, including permanent items	(386)	(414)	(439)

\$ 3,662 \$ 6,994 \$ 4,458

Our effective income tax rates were 23%, 32% and 30% in 2018, 2017 and 2016, respectively. Our effective income tax rate takes into account the source of taxable income, by state, and available income tax credits. The provision for income taxes in 2018, 2017 and 2016 includes approximately \$186,000, \$253,000 and \$247,000, respectively, in income tax benefits related to the tax benefits realized from stock option deductions.

The significant components of deferred income tax (benefit) expense attributable to income from continuing operations before income taxes for the years ended April 30, 2018, 2017, and 2016 are as follows:

	Years ended April 30,		
	2018	2017	2016
	(In thousands)		
Deferred tax expense/(benefit)	\$ 1,823	\$ 968	\$ (310)
Deferred tax benefit related to tax reform	(1,206)		
Increase (decrease) in the valuation allowance for deferred tax assets	4	(293)	(2)
	\$ 621	\$ 675	\$ (312)

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The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at April 30, 2018 and 2017 are presented as follows:

	2018	2017
	(In thousands)	
Deferred tax assets:		
Accruals and expenses not deducted for tax purposes	\$ 339	\$ 461
State net operating loss carryforwards	226	295
Fixed asset basis differences	883	1,384
Nonqualified stock options	762	1,679
Deferred revenue	53	234
Total gross deferred tax assets	2,263	4,053
Less valuation allowance	170	166
Net deferred tax	2,093	3,887
Deferred tax liabilities:		
Capitalized computer software development costs	(2,432)	(3,298)
Net gains/losses on trading securities	(938)	(1,019)
Goodwill and intangible assets basis differences	(601)	(939)
Deferred agent commissions	(737)	(625)
Total gross deferred tax liabilities	(4,708)	(5,881)
Net deferred tax liabilities	\$ (2,615)	\$ (1,994)

At April 30, 2018, the Company has approximately \$5.7 million of various state net operating loss carryforwards which are available to offset future state taxable income, if any, through 2035.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. Based upon reversal of deferred tax liabilities and expected future profitability, management believes it is more likely than not the Company will realize the benefits of these deductible differences, net of the existing valuation allowances, at April 30, 2018.

The Company applies the accounting provisions which require us to prescribe a recognition threshold and measurement attribution for the financial statement recognition and measurement of a tax position taken or expected to be taken within an income tax return.

As of April 30, 2018, 2017 and 2016, we have recorded approximately \$56,000, \$57,000, and \$101,000, respectively, of unrecognized tax benefits, inclusive of interest and penalties, all of which would impact our effective tax rate if

recognized. The liability for unrecognized tax benefits is recorded net of any federal tax benefit that would result from payment.

We recognize potential accrued interest and penalties related to unrecognized tax benefits within income tax expense. To the extent interest and penalties are not assessed with respect to uncertain tax positions, amounts accrued will be reduced and reflected as a reduction of the overall income tax provision. As of April 30, 2018 and 2017, we had recorded a liability for potential penalties and interest of approximately \$24,000 and \$24,000, respectively, related to uncertain tax positions.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows, excluding interest and penalties (in thousands):

	2018	2017
Balance at beginning of the period	\$ 33	\$ 54
Decreases as a result of positions taken during prior periods	(1)	(25)
Increases as a result of positions taken during the current period		4
Balance at April 30,	\$ 32	\$ 33

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We conduct business globally and, as a result, file consolidated income tax returns in the United States Federal jurisdiction and in many state and foreign jurisdictions. We are no longer subject to state and local, or non-U.S. income tax examinations for years prior to 2001. We are no longer subject to U.S. Federal income tax examination for years prior to 2014.

During the years ended April 30, 2018 and 2017, we recorded research and development state tax credits against payroll taxes of approximately \$290,000 and \$436,000, respectively, which reduced general and administrative expenses by the same amount.

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (the Act), which significantly changed U.S. tax law. The Act lowered our U.S. statutory federal income tax rate from 35% to 21% effective January 1, 2018. For fiscal year 2018, our blended U.S. federal statutory tax rate is 30.3%. This is the result of using the tax rate of 35% for the first eight months of fiscal year 2018 and the reduced tax rate of 21% for the final four months of fiscal year 2018. During the year ended April 30, 2018, we recorded a \$1.2 million benefit from the impact of changes in the tax rate, primarily on deferred tax assets and liabilities, which was included in income tax expense on our consolidated statement of operations and deferred income taxes on our consolidated balance sheet. We remeasured our deferred taxes to reflect the reduced rate that will apply when these deferred taxes are settled or realized in future periods. To calculate the remeasurement of deferred taxes, we estimated when the existing deferred taxes will be settled or realized.

(7) Shareholders Equity

Except for the election or removal of Directors and class votes as required by law or the Articles of Incorporation, holders of both classes of common stock vote as a single class on all matters with each Class A common share entitled to cast one-tenth vote per share and each Class B common share entitled to cast one vote per share. Neither class has cumulative voting rights. Holders of Class A common shares, as a class, are entitled to elect 25% of the board of directors (rounded up to the nearest whole number of Directors) if the number of outstanding Class A common shares is at least 10% of the number of outstanding shares of both classes of common stock. No cash or property dividend may be paid to holders of Class B common shares during any fiscal year of the Company unless a dividend of \$0.05 per share has been paid in such year on each outstanding Class A common share. This \$0.05 per share annual dividend preference is noncumulative. Dividends per Class B common share during any fiscal year may not exceed dividends paid per Class A common share during each year. Each Class B common share is convertible at any time into one Class A common share at the option of the shareholder.

Stock Option Plans

As of April 30, 2018, the Company has outstanding stock options granted pursuant to four stock option plans. The 2001 Stock Option Plan (the 2001 Option Plan) became effective on September 1, 2000. This Plan was terminated and replaced by the 2011 Equity Compensation Plan (the 2011 Option Plan) effective May 17, 2010. Options outstanding under the 2001 Option Plan remain in effect, but no new options may be granted under the plan. Effective July 9, 2009, we adopted the Logility, Inc. 1997 Stock Plan and the Logility, Inc. 2007 Stock Plan as equity plans of American Software, although we will not grant any additional stock options under these plans.

Under the 2011 Option Plan, options to purchase Class A common shares are granted in the form of both incentive stock options and non-qualified stock options. The number of options granted under this plan is determined with each grant. By resolution of the Board of Directors, non-employee directors receive grants of non-qualified options to purchase 5,000 shares upon election and 3,000 shares at the end of each fiscal quarter. The price of such grants is equal to the closing market price of the shares on the date of grant. Options are exercisable based on the terms of such

options, but no more than 6 years after the date of grant (or five years for incentive stock options granted to any person who owns 10% or more of the combined voting power of all classes of capital stock of the Company at the time of grant). A total of 7,000,000 shares are authorized for issuance pursuant to options granted under this Plan. Incentive and nonqualified options exercisable at April 30, 2018, 2017 and 2016 totaled 965,416, 1,365,586, and 1,468,257, respectively. Options available for grant at April 30, 2018, for the 2011 Option Plan are 1,396,543 shares.

At the 2017 Annual Meeting, the shareholders voted on increasing the shares authorized under the 2011 Option Plan from 6,000,000 to 7,000,000. When stock options are exercised, it is the Company's policy to issue stock from authorized shares rather than treasury shares.

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A summary of changes in outstanding options for the year ended April 30, 2018 is as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at May 1, 2017	3,079,146	\$ 9.00		
Granted	1,208,000	11.24		
Exercised	(984,310)	8.74		
Forfeited	(27,000)	9.36		
Outstanding at April 30, 2018	3,275,836	\$ 9.90	3.7	\$ 9,368,422
Exercisable at April 30, 2018	965,416	\$ 9.07	2.4	\$ 3,563,542

The weighted-average grant date fair value of stock options granted during the years ended April 30, 2018, 2017, and 2016 are \$2.01, \$1.96, and \$1.60 per share, respectively. The fair value of each option award is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions for the years ended April 30, 2018, 2017, and 2016:

	2018	2017	2016
Dividend yield	3.9%	4.0%	4.9%
Expected volatility	28.9%	32.7%	33.6%
Risk-free interest rate	1.9%	1.2%	1.5%
Expected term	5.0 years	5.0 years	5.0 years

The expected volatility is based on the historical volatility and implied volatility. The Company uses historical data to estimate stock option exercise and forfeiture rates. The expected term represents the period over which the share-based awards are expected to be outstanding. Beginning after December 31, 2007, the expected term was estimated using historical data. The dividend yield is an estimate of the expected dividend yield on the Company's stock. The risk-free rate is based on U.S. Treasury yields in effect at the time of the grant for the expected term of the stock options.

Options issued after May 1, 2007 with graded vesting are valued as a single award. The total value of the award is expensed on a straight-line basis over the vesting period with the amount of compensation cost recognized at any date at least equal to the portion of the grant date value of the award that is vested at that date. During the years ended April 30, 2018, 2017, and 2016, we issued 984,310, 754,811 and 306,848 shares of common stock, respectively, resulting from the exercise of stock options. The total intrinsic value of options exercised during the years ended April 30, 2018, 2017 and 2016 based on market value at the exercise dates was \$2,999,372, \$2,280,650 and \$1,219,406 respectively. The fair value of grants vested during the years ended April 30, 2018, 2017 and 2016 was \$1,287,222, \$1,550,190 and \$1,495,065, respectively. As of April 30, 2018, unrecognized compensation cost related to unvested stock option awards approximated \$3.3 million and is expected to be recognized over a weighted average period of 1.8 years.

Stock Repurchases

On August 19, 2002, our Board of Directors approved a resolution authorizing the repurchase of up to 2.0 million shares of our Class A common stock. These repurchases have been and will be made through open market purchases at prevailing market prices. The timing of any repurchases will depend upon market conditions, the market price of our common stock and management's assessment of our liquidity and cash flow needs. For this repurchase plan, through April 30, 2018, we have repurchased 1,053,679 shares of common stock at a cost of approximately \$6.2 million. Under all repurchase plans as of April 30, 2018, we have repurchased 4,588,632 shares of common stock at a cost of approximately \$25.6 million.

(8) Commitments and Contingencies

(a) Leases

The Company leases office facilities and equipment under various operating leases. Rental expense for these leases approximated \$1.2 million, \$1.1 million, and \$1.0 million for the years ended April 30, 2018, 2017, and 2016, respectively.

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The Company leased several floors of its headquarters in Atlanta, GA under various operating leases. Rental income for these leases approximated \$357,000, \$538,000 and \$723,000 for the years ended April 30, 2018, 2017 and 2016, respectively. In addition, the Company owned other properties leased under various operating leases. Rental income for these leases approximated \$0, \$236,000 and \$309,000 for the years ended April 30, 2018, 2017, and 2016, respectively. On February 23, 2017, the Company divested the property to which these leases were associated. The rental income is included as a component of Other income, net in the accompanying consolidated statements of operations.

Future minimum lease payments under noncancelable operating leases (with initial or remaining lease terms in excess of one year) as of April 30, 2018 are as follows (existence of renewal or escalation clauses) (in thousands):

Years ended April 30:	
2019	\$ 1,056
2020	419
2021	346
2022	289
2023	97
Thereafter	
	\$ 2,207

Future minimum lease rentals receivable under noncancelable operating leases (with initial or remaining lease terms in excess of one year) as of April 30, 2018 are as follows (already included or prorated at the Company's occupied building) (in thousands):

Years ended April 30:	
2019	\$ 301
2020	61
2021	30
2022	
2023	
Thereafter	
	\$ 392

(b) 401(k) Profit Sharing Plan

Employees are offered the opportunity to participate in the Company's 401(k) Profit Sharing Plan (the 401(k) Plan), which is intended to be a tax-qualified defined contribution plan under Section 401(k) of the Internal Revenue Code. Under the 401(k) Plan, employees are eligible to participate on the first day of the month following the date of hire. Eligible employees may contribute up to 60% of their salary to the 401(k) Plan. Subject to certain limitations, the Company may make a discretionary profit sharing contribution at an amount determined by the board of directors of the Company. The Company's profit sharing contribution was \$330,000 for 2018 and did not make any profit sharing contributions for 2017 or 2016.

(c) Contingencies

The Company more often than not indemnifies its customers against damages and costs resulting from claims of patent, copyright, or trademark infringement associated with use of the Company's products. The Company has historically not been required to make any payments under such indemnifications. However, the Company continues to monitor the conditions that are subject to the indemnifications to identify whether it is probable that a loss has occurred, and would recognize any such losses under the indemnifications when those losses are estimable.

In addition, the Company warrants to customers that the Company's products operate substantially in accordance with the software product's specifications. Historically, no costs have been incurred related to software product warranties and none are expected in the future, and as such no accruals for software product warranty costs have been made. Additionally, the Company is involved in various claims arising in the ordinary course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on the financial position or results of operations of the Company.

Table of Contents**(9) Segment Information**

FASB ASC 280, *Segment Reporting*, establishes standards for reporting information about operating segments. Operating segments are defined as components of a public entity about which separate financial information is available that is evaluated regularly by the chief operating decision makers (CODMs), or decision making group, in deciding how to allocate resources and in assessing performance. Our CODMs are our Principal Executive Officer (PEO) and President. While our CODMs are apprised of a variety of financial metrics and information, we manage our business primarily on a segment basis, with the CODMs evaluating performance based upon segment operating profit or loss that includes an allocation of common expenses, but excludes certain unallocated corporate expenses, which are included in the Other segment. Our CODMs review the operating results of our three segments, assess performance and allocate resources in a manner that is consistent with the changing market dynamics that we have experienced. As a result, in the third quarter of fiscal 2018, we updated our operating segments to reflect the fact that we provide our software solutions through three major operating segments, which are further broken down into a total of six major product and service groups. The three operating segments are (1) Supply Chain Management (SCM), (2) Information Technology (IT) Consulting and (3) Other.

The SCM segment consists of Logility, which provides supply chain optimization and advance retail planning solutions, as an integrated suite of sales and operations planning, demand optimization, inventory optimization, manufacturing planning and scheduling, supply optimization, retail allocation and merchandise planning and transportation optimization, as well as (i) DMI, which provides collaborative supply chain solutions to streamline and optimize the forecasting, inventory, production, supply, allocation, distribution and management of products between trading partners, (ii) New Generation Computing (NGC), which provides cloud solutions for supply chain management, product lifecycle management, quality control, vendor compliance and enterprise resource planning for both retailers and manufacturers in the apparel, sewn products and furniture industries, and (iii) Halo, which provides advanced analytics and business intelligence solutions for the supply chain market. The IT Consulting segment consists of The Proven Method, Inc., an IT staffing and consulting services firm, which provides support for our software products, such as software enhancements, documentation, updates, customer education, consulting, systems integration services, maintenance and support services. The Other segment consists of (i) American Software ERP, which provides purchasing and materials management, customer order processing, financial, e-commerce and traditional manufacturing solutions, and (ii) unallocated corporate overhead expenses.

Previously, we maintained three operating segments: (1) SCM, (2) IT and (3) Enterprise Resource Planning (ERP). As a result of the organizational realignment during the third quarter fiscal 2018, NGC was repositioned out of the ERP segment and into the SCM segment. There were no changes to the IT segment. Certain prior year amounts have been recasted to conform to fiscal 2018 presentation. The change in reportable segments had no effect on our previously reported consolidated financial position or results of operations.

All of our revenues are derived from external customers. We do not have any inter-segment revenue. Our income taxes and dividends are paid at a consolidated level. Consequently, it is not practical to show these items by operating segment.

Following is information related to each segment as of and for the years ended April 30, 2018, 2017 and 2016:

	2018	2017	2016
Revenues:			
Supply Chain Management	\$ 91,613	\$ 84,058	\$ 87,001

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IT Consulting	18,460	19,633	23,913
Other	2,630	2,595	2,975
	\$ 112,703	\$ 106,286	\$ 113,889
Operating income/(loss) before intersegment eliminations:			
Supply Chain Management	\$ 19,580	\$ 13,103	\$ 17,793
IT Consulting	985	890	1,327
Other	(7,034)	(6,227)	(5,593)
	\$ 13,531	\$ 7,766	\$ 13,527
Intersegment eliminations:			
Supply Chain Management	\$ 3,566	\$ 3,406	\$ 2,910
IT Consulting	(31)	(34)	(11)
Other	(3,535)	(3,372)	(2,899)
	\$	\$	\$

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	2018	2017	2016
Operating income/(loss) after intersegment eliminations:			
Supply Chain Management	\$ 23,146	\$ 16,509	\$ 20,703
IT Consulting	954	856	1,316
Other	(10,569)	(9,599)	(8,492)
	\$ 13,531	\$ 7,766	\$ 13,527
Capital expenditures:			
Supply Chain Management	\$ 263	\$ 321	\$ 232
IT Consulting	10	2	
Other	1,155	408	423
	\$ 1,428	\$ 731	\$ 655
Capitalized software:			
Supply Chain Management	\$ 4,804	\$ 3,724	\$ 3,246
IT Consulting			
Other			
	\$ 4,804	\$ 3,724	\$ 3,246
Depreciation and amortization:			
Supply Chain Management	\$ 5,827	\$ 6,173	\$ 5,054
IT Consulting	7	7	10
Other	196	460	554
	\$ 6,030	\$ 6,640	\$ 5,618
Interest income:			
Supply Chain Management	\$ 1,043	\$ 817	\$ 970
IT Consulting			
Other	532	440	376
	\$ 1,575	\$ 1,257	\$ 1,346
Earnings/(loss) before income taxes:			
Supply Chain Management	\$ 20,026	\$ 13,050	\$ 17,642
IT Consulting	985	890	1,327
Other	(5,296)	7,675	(4,269)
	\$ 15,715	\$ 21,615	\$ 14,700
	April 30,	April 30,	
	2018	2017	
Total Consolidated Assets:			

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Supply Chain Management	\$ 112,881	\$ 99,557
IT Consulting	5,538	4,056
Other	44,546	45,161
	\$ 162,965	\$ 148,774

International Revenue and Significant Customer

International revenues approximated \$21.8 million or 19%, \$18.8 million or 18% and \$19.8 million or 17%, of consolidated revenues for the years ended April 30, 2018, 2017, and 2016, respectively, and were derived primarily from customers in Canada and Europe. International revenue is based on the delivery of software and performance of services.

No one customer accounted for more than 10% of total revenues for the years ended April 30, 2018, April 30, 2017 and April 30, 2016.

Table of Contents**(10) Financial Statements and Supplementary Data (Unaudited)**

The following schedule presents results for each quarter in the years ended April 30, 2018 and 2017 (in thousands, except per share amounts):

	Total revenues	Gross margin	Operating income	Net earnings	Diluted earnings per share*
Quarter ended:					
July 31, 2017	\$ 26,886	\$ 15,225	\$ 3,622	\$ 2,725	\$ 0.09
October 31, 2017	26,337	14,006	3,242	2,480	0.08
January 31, 2018	30,117	17,046	4,204	5,580	0.18
April 30, 2018	29,363	16,426	2,463	1,268	0.04
Year ended April 30, 2018	\$ 112,703	\$ 62,703	\$ 13,531	\$ 12,053	\$ 0.40
Quarter ended:					
July 31, 2016	\$ 27,433	\$ 13,796	\$ 1,646	\$ 1,688	\$ 0.06
October 31, 2016	26,146	13,018	708	412	0.01
January 31, 2017	26,441	14,049	2,455	2,243	0.08
April 30, 2017	26,266	14,340	2,957	10,278	0.34
Year ended April 30, 2017	\$ 106,286	\$ 55,202	\$ 7,766	\$ 14,621	\$ 0.49

* Table may contain rounding

(11) Subsequent Events

On May 11, 2018, our Board of Directors declared a quarterly cash dividend of \$0.11 per share of our Class A and Class B common stock. The cash dividend is payable on August 25, 2018 to Class A and Class B shareholders of record at the close of business on August 11, 2018.

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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 disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934 (Exchange Act)) are designed to provide reasonable assurance that information required to be disclosed in our reports filed or submitted under the Exchange Act, such as this annual report on Form 10-K, is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms. Our disclosure controls and procedures are also designed to ensure that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

Our principal executive officer and principal financial officer, with the assistance of our Disclosure Committee, have conducted an evaluation of the effectiveness of our disclosure controls and procedures as of April 30, 2018. We perform this evaluation on a quarterly basis so that the conclusions concerning the effectiveness of our disclosure controls and procedures can be reported in our annual report on Form 10-K and quarterly reports on Form 10-Q. Based on this evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective to provide such reasonable assurance as of April 30, 2018.

We believe our consolidated financial statements fairly present in all material respects our financial position, results of operations and cash flows in our annual report on Form 10-K. The unqualified opinion of our independent registered public accounting firm on our consolidated financial statements as of April 30, 2018 and 2017 and for each of the years in the three-year period ended April 30, 2018 is included in this annual report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have not been any changes in the Company's internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the last fiscal quarter of fiscal 2018 to which this report relates that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Reports on Internal Control Over Financial Reporting

Management's report on internal control over financial reporting and the report of the independent registered public accounting firm on internal control over financial reporting are included under Item 8, Financial Statements and Supplementary Data, of this report.

ITEM 9B. OTHER INFORMATION

None.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated by reference from the information contained in our Proxy Statement for the Annual Meeting of Shareholders expected to be filed with the SEC on or prior to July 27, 2018 under the captions Election of Directors, Executive Compensation, Section 16(a) Beneficial Ownership Reporting Compliance, Code of Business Conduct and Ethics, and Committees of the Board of Directors.

ITEM 11. EXECUTIVE COMPENSATION

This information is set forth under the caption Executive Compensation in the Proxy Statement, which information is incorporated herein by reference.

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

Information regarding security ownership of management and others is set forth under the caption Security Ownership of Certain Beneficial Owners and Management in the Proxy Statement, which information is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Policy Regarding Transactions with Related Persons

On December 8, 2003, our Board of Directors adopted a resolution directing the Audit Committee of the Board of Directors to establish and implement procedures for identifying and conducting an appropriate review of any proposed transaction that meets the definition of related party transaction within the meaning of Item 404 of SEC Regulation S-K. In January 2004, the Audit Committee adopted written procedures in accordance with such direction. Under those procedures, the Audit Committee reviews and evaluates any proposed related party transaction and determines whether the terms of such transaction, judged at the time of the determination, are fair to the Company. Our officers are instructed that when a related party transaction is proposed, they are to bring it to the attention of the Audit Committee, which then reviews the transaction and makes a determination of whether it meets the above standard. The Audit Committee is required to prepare a report of its deliberations, conclusions and recommendations, and furnish that report to the full Board of Directors.

Information regarding director independence is set forth under the captions Director Independence and Committees of the Board of Directors in the Proxy Statement, which information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

This information is set forth under the caption "Ratification of Appointment of Independent Registered Public Accounting Firm" in the Proxy Statement, which information is incorporated herein by reference.

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PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) *Documents filed as part of this report.*

1. *Financial statements; All financial statements of the Company as described in Item 8 of this report on Form 10-K.*

2. *Financial statement schedule included in Part IV of this Form:*

Schedule II Consolidated Valuation Accounts for the three years ended April 30, 2018

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All other financial statements and schedules not listed above are omitted as the required information is not applicable or the information is presented in the financial statements or related notes.

3. *Exhibits*

The following exhibits are filed herewith or incorporated herein by reference:

- 3.1 The Company's Amended and Restated Articles of Incorporation, and amendments thereto.(1)(P)
- 3.2 The Company's Amended and Restated By-Laws dated May 18, 2009.(2)
- 10.1 American Software, Inc. 401(k)/Profit Sharing Plan and Trust Agreement.(3)(P)
- 10.2 Amendment to American Software, Inc. 401(k)/Profit Sharing Plan and Trust Agreement.(4)
- 10.3 The Logility, Inc. 1997 Stock Plan as Amended and Restated Effective July 9, 2009.(5)
- 10.4 The Logility, Inc. 2007 Stock Plan as Amended and Restated Effective July 9, 2009.(5)
- 10.5 The Company's 2001 Stock Option Plan, as Amended and Restated Effective August 17, 2009.(6)
- 10.6 The Company's 2011 Equity Compensation Plan, as amended.(7)
- 10.7 Retention Agreement, dated as of July 11, 2016, by and between American Software, Inc. and James C. Edenfield.(8)
- 10.8 Retention Agreement, dated as of July 11, 2016, by and between American Software, Inc. and J. Michael Edenfield.(9)
- 10.9 Retention Agreement, dated as of July 11, 2016, by and between American Software, Inc. and Vincent C. Klinges.(10)
- 10.10 Retention Agreement, dated as of July 11, 2016, by and between American Software, Inc. and James R. McGuone.(11)
- 10.11 Retention Agreement, dated as of July 11, 2016, by and between American Software, Inc. and H. Allan Dow.(12)

21.1	<u>List of Subsidiaries.</u>
23.1	<u>Consent of Independent Registered Public Accounting Firm.</u>
31.1	<u>Certification Pursuant to Rule 13a-14(a)/15d-14(a).</u>
31.2	<u>Certification Pursuant to Rule 13a-14(a)/15d-14(a).</u>
32.1	<u>Certifications Pursuant to Section 906 of Sarbanes-Oxley Act of 2002.</u>
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

- (1) Incorporated by reference herein. Filed by the Company as an exhibit to its quarterly report filed on Form 10-Q for the quarter ended October 31, 1990.

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- (2) Incorporated by reference herein. Filed by the Company as an exhibit to its quarterly report filed on Form 10-Q for the quarter ended January 31, 2010.
- (3) Incorporated by reference herein. Filed by the Company as an exhibit to its Registration Statement No. 33-55214 filed on Form S-8 on December 1, 1992.
- (4) Incorporated by reference herein. Filed by the Company as an exhibit to its annual report filed on Form 10-K for the fiscal year ended April 30, 2002.
- (5) Incorporated by reference herein. Filed by the Company as an exhibit to its Registration Statement No. 333-160559 filed on Form S-8 on July 13, 2009.
- (6) Incorporated by reference herein. Filed by the Company as an exhibit to its Registration Statement No. 333-161471 filed on Form S-8 on August 21, 2009.
- (7) Incorporated by reference herein. Filed by the Company as an appendix to its Definitive Proxy Statement filed on July 27, 2017.
- (8) Incorporated by reference herein. Filed by the Company as exhibit 10.1 to its current report on Form 8-K filed on July 15, 2016.
- (9) Incorporated by reference herein. Filed by the Company as exhibit 10.2 to its current report on Form 8-K filed on July 15, 2016.
- (10) Incorporated by reference herein. Filed by the Company as exhibit 10.3 to its current report on Form 8-K filed on July 15, 2016.
- (11) Incorporated by reference herein. Filed by the Company as exhibit 10.4 to its current report on Form 8-K filed on July 15, 2016.
- (12) Incorporated by reference herein. Filed by the Company as exhibit 10.1 to its current report on Form 8-K/A filed on July 13, 2017.

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SCHEDULE II

AMERICAN SOFTWARE, INC.

CONSOLIDATED VALUATION ACCOUNTS

Years ended April 30, 2018, 2017, 2016

(In thousands)

Allowance for Doubtful Accounts

Year ended:	Balance at beginning of year	Amounts charged to expense	Other Additions (1)	Deductions (2)	Balance at end of year
April 30, 2018	\$ 171	24		36	159
April 30, 2017	\$ 178	39		46	171
April 30, 2016	\$ 215		41	78	178

(1) Recovery of previously written-off amounts.

(2) Write-off of uncollectible accounts.

Deferred Income Tax Valuation Allowance

The deferred tax valuation allowance roll-forward is included in Item 8 of this Report in the Notes to Consolidated Financial Statements Note 6.

See accompanying report of independent registered public accounting firm.

ITEM 16. FORM 10-K SUMMARY.

None.

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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.

AMERICAN SOFTWARE, INC.

By: /s/ James C. Edenfield
James C. Edenfield
*Executive Chairman, Treasurer and
Director
(Principal Executive Officer)*

Date: July 13, 2018

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

Signatures	Title	Date
/s/ James C. Edenfield James C. Edenfield	Executive Chairman, Treasurer and Director (Principal Executive Officer)	July 13, 2018
/s/ J. Michael Edenfield J. Michael Edenfield	Director	July 13, 2018
/s/ W. Dennis Hogue W. Dennis Hogue	Director	July 13, 2018
/s/ James B. Miller, Jr. James B. Miller, Jr.	Director	July 13, 2018
/s/ Thomas L. Newberry, V. Thomas L. Newberry, V.	Director	July 13, 2018
/s/ Matthew G. McKenna Matthew G. McKenna	Director	July 13, 2018
/s/ Vincent C. Klinges	Chief Financial Officer (Principal Financial Officer)	July 13, 2018

Vincent C. Klinges

/s/ Bryan L. Sell

Controller and Principal Accounting Officer

July 13, 2018

Bryan L. Sell