COMPUTER TASK GROUP INC
Form 10-K
March 14, 2018

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 December 31, 2017

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 No. 1-9410

COMPUTER TASK GROUP, INCORPORATED

(Exact name of registrant as specified in its charter)

New York	16-0912632
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
800 Delaware Avenue, Buffalo, New York	14209
(Address of principal executive offices)	(Zip Code)

Registrant’s telephone number, including area code: (716) 882-8000

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

Title of each class	Name of each exchange on which registered
Common Stock, $.01 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (232.405 of this chapter) 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 (229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer	Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company)	Smaller reporting company
	Emerging growth company

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

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

The aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates, computed by reference to the price at which the common equity was last sold on the last business day of the registrant's most recently completed second quarter was $83.5 million. Solely for the purposes of this calculation, all persons who are or may be executive officers or directors of the registrant have been deemed to be affiliates.

The total number of shares of Common Stock of the Registrant outstanding at March 2, 2018 was 15,290,131.

DOCUMENTS INCORPORATED BY REFERENCE

None.

SEC Form 10-K Index

As used in this annual report on Form 10-K, references to “CTG,” “the Company” or “the Registrant” refer to Computer Task Group, Incorporated and its subsidiaries, unless the context suggests otherwise.

PART I

Forward-Looking Statements

This annual report on Form 10-K contains forward-looking statements made by the management of Computer Task Group, Incorporated that are subject to a number of risks and uncertainties. These forward-looking statements are based on information as of the date of this report. The Company assumes no obligation to update these statements based on information from and after the date of this report. Generally, forward looking statements include words or phrases such as “anticipates,” “believes,” “estimates,” “expects,” “intends,” “plans,” “projects,” “could,” “may,” “might,” “sho words and phrases of similar impact. The forward-looking statements include, but are not limited to, statements regarding future operations, industry trends or conditions and the business environment, and statements regarding future levels of or trends in business strategy and expectations, new business opportunities, cost control initiatives, business wins, market demand, revenue, operating expenses, capital expenditures, and financing. The forward-looking statements are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Numerous factors could cause actual results to differ materially from those in the forward-looking statements, including the following: (i) the availability to CTG of qualified professional staff, (ii) domestic and foreign industry competition for clients and talent, including technical, sales and management personnel, (iii) increased bargaining power of large clients, (iv) the Company's ability to protect confidential client data, (v) the partial or complete loss of the revenue the Company generates from International Business Machines Corporation (IBM) and SDI International (SDI), (vi) the uncertainty of clients' implementations of cost reduction projects, (vii) the effect of healthcare reform and initiatives, (viii) the mix of work between staffing and solutions, (ix) currency exchange risks, (x) risks associated with operating in foreign jurisdictions, (xi) renegotiations, nullification, or breaches of contracts with clients, vendors, subcontractors or other parties, (xii) the impact of current and future laws and government regulation, as well as repeal or modification of such, affecting the information technology (IT) solutions and staffing industry, taxes and the Company's operations in particular, (xiii) industry and economic conditions, including fluctuations in demand for IT services, (xiv) consolidation among the Company's competitors or clients, (xv) the need to supplement or change our IT services in response to new offerings in the industry or changes in client requirements for IT products and solutions, (xvi) the risks associated with acquisitions, (xvii) actions of activist shareholders, and (xviii) the risks described in Item 1A of this annual report on Form 10-K and from time to time in the Company's reports filed with the Securities and Exchange Commission (SEC).

Item 1. Business
Overview

CTG was incorporated in Buffalo, New York on March 11, 1966, and its corporate headquarters are located at 800 Delaware Avenue, Buffalo, New York 14209 (716-882-8000). CTG is an IT solutions and staffing services company with operations in North America, Europe, and India. CTG employs approximately 3,200 people worldwide. During 2017, the Company had eight operating subsidiaries: Computer Task Group of Canada, Inc., providing services in Canada; Computer Task Group Belgium N.V., CTG ITS S.A., Computer Task Group IT Solutions, S.A., Computer Task Group Luxembourg PSF, Computer Task Group (U.K.) Ltd., and CTG Health Solutions N.V., each primarily providing services in Europe; and Computer Task Information Technology Private Services Limited, providing services in India. Services provided in North America are primarily performed by the parent corporation, CTG.

Services

The Company primarily operates in one industry segment, providing IT services to its clients. At the highest level, CTG delivers services that are either IT solutions or IT and other staffing. CTG delivers these primary services to all of the markets that it serves. The services provided typically encompass the IT business solution life cycle, including phases for planning, developing, implementing, managing, and ultimately maintaining the IT solution. A typical client is an organization with large, complex information and data processing requirements. The Company's IT solutions and IT and other staffing services are further described as follows:

- IT Solutions: CTG's IT solutions typically include engagements with a fixed duration and deliverables that achieve value-based outcomes by applying the right IT solutions to address clients' business needs. These solutions include the implementation and optimization of packaged software applications, the development and deployment of customized software and solutions designed to fit the needs of a specific client or market, and the design and distribution of complex technology components. Additionally, IT Solutions services often include consulting services provided to clients at higher billable rates.

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- IT and Other Staffing: CTG's staffing services address a range of IT and business resource needs, from filling specific talent gaps to managing high-volume staffing programs. CTG recruits, retains, and manages IT and other talent for its clients, which are primarily large technology service providers and other companies with multiple locations and a significant need for high-volume external IT, administrative, or other resources.

IT solutions and IT staffing and other revenue as a percentage of consolidated revenue for the three years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
IT solutions	30 %	29 %	33 %
IT and other staffing	70 %	71 %	67 %
Total	100 %	100 %	100 %

Capabilities

CTG provides a full range of offerings spanning seven service areas that, collectively, address many of our clients' most pressing technology and business challenges. CTG's capabilities ensure that our clients are utilizing the right information technology to meet their business needs, maximizing the value from their IT systems, and operating in the most efficient and effective manner.

CTG's flexible offerings are delivered as an IT solution or IT and other staffing service, or as a strategy or service offering, allowing CTG to meet the unique needs of each client. All offerings are supported with proven program and project management processes and tools that ensure the reliability, transparency, and accountability that CTG clients have come to expect.

CTG provides capabilities in the following service areas:

- Advisory and Planning: Supports our clients' needs to evaluate, select, and design new technology, align technology and business strategy, and optimize technology for improved performance and benefits realization.
- Application Services: Provides clients with a full range of technical support to maximize the value of enterprise software, with services that include development, deployment, integration, optimization, and application management and support.
- Quality Assurance and Testing: Ensures new and legacy technologies are rigorously verified to meet business requirements and industry standards. CTG delivers full testing programs for clients or can help clients assess, develop, improve, implement, and automate their own programs, as well as provide testing training and certification.
- IT Services Management (ITSM): Ensures the right processes, people, and technology are in place to support business goals. Offerings support our clients' needs to deliver IT services in a more effective and efficient manner and future-proof IT to deal with changing business dynamics and threats with services including help/service desk, ITSM process improvement, technology and infrastructure implementation, disaster recovery and business continuity, and IT infrastructure outsourcing.
- Information Management: Helps our clients manage and derive greater value and competitive advantage from data with services that include business intelligence and analytics, enterprise data warehouses, data governance, disclosure management, master data management, and legacy data archiving.
- Regulatory Compliance: Assists our clients in understanding, preparing for, managing, and mitigating risk related to government regulations and industry standards. Offerings include audits and assessments, validation, and program management for highly regulated industries such as healthcare and financial services, as well as cross-industry data privacy and security requirements.
- Strategic Staffing: Addresses our clients' needs ranging from staff augmentation and volume staffing to fill specific technical skills gaps, to fully managed solutions to improve recruiting quality, speed, and cost. CTG also provides

comprehensive vendor management and preferred-supplier solutions to help clients achieve significant improvements in managing contractors and technical-support processes.

Vertical Markets

The Company promotes a majority of its services through five vertical market focus areas: technology service providers, manufacturing, healthcare (which includes services provided to healthcare providers, health insurers (payers), and life sciences companies), financial services, and energy. The remainder of CTG's revenue is derived from general markets.

CTG's revenue by vertical market as a percentage of consolidated revenue for the three years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
Technology service providers	33.1 %	35.2 %	31.1 %
Manufacturing	24.3 %	24.2 %	25.7 %
Healthcare	16.8 %	18.2 %	23.5 %
Financial services	9.1 %	7.8 %	7.2 %
Energy	5.0 %	5.3 %	5.4 %
General markets	11.7 %	9.3 %	7.1 %
Total	100.0 %	100.0 %	100.0 %

Revenue for the Company's technology service providers vertical market as a percentage of consolidated revenue decreased in 2017 as compared with 2016 due to a decrease in demand from several of the Company's largest clients in its IT and other staffing services business, which are included in this vertical market. Revenue from IBM, our largest client, which is included in this vertical market, decreased in 2017 as compared with 2016. The revenue as a percentage of consolidated revenue increased for 2016 as compared with 2015 due to a change in business mix. Demand from this vertical market began to slow in the 2016 fourth quarter as several large clients cut back on their requirements for our services due to their own challenging financial results.

The revenue in our manufacturing vertical market is primarily generated from several large staffing clients, including Lenovo (through SDI as a vendor manager for Lenovo) which is our second largest client. Revenue from Lenovo decreased slightly in 2017 as compared with 2016. A reduction in revenue in other vertical markets reduced the impact of these losses as a percentage of total revenue. Revenue from Lenovo decreased by approximately $9.5 million in 2016 as compared with 2015 primarily due to a reduction in requirements from this client.

In 2015, 2016 and 2017, the demand from our healthcare clients decreased. This decrease was a continuation of a reduction related to prior years, and directly related to the U.S. federal government sequestration which cut Medicare reimbursements to hospitals and health systems by 2% starting in April 2013. As a result, the Company's healthcare revenue, primarily from electronic health records (EHR) and related projects, declined in 2014, and has continued to decrease since that time. The Company continues to transform its business from selling primarily EHR projects to advisory and technical services, outsourcing, and staff augmentation.

Revenue for the Company's financial services vertical market as a percentage of consolidated revenue increased in 2017 as compared with 2016 due to a change in business mix. Revenue in this vertical market increased in 2017, while in 2016, revenue from a number of the other vertical markets had larger reductions during this time period which caused the percentage of total revenue for this vertical market to increase.

Revenue for the Company's energy vertical market decreased as a percentage of consolidated revenue in 2017 as compared with 2016, and in 2016 as compared with 2015, as demand in this vertical market declined. Generally, the decrease in the price of oil caused several of our clients to reduce their overall spending, including requirements for IT services, in each of 2017, 2016 and 2015.

For the year ended December 31, 2017, CTG provided its services to 463 clients in North America and Europe. In North America, the Company operates in the United States and Canada, with greater than 99% of 2017 North American revenue generated in the United States. In Europe, the Company operates in Belgium, Luxembourg, and the United Kingdom. Of total 2017 consolidated revenue of $301.2 million, approximately 73% was generated in North America and 27% in Europe. Two clients, IBM and Lenovo (through SDI as a vendor manager), each accounted for greater than 10% of CTG's consolidated revenue in 2017.

Revenue Recognition and Backlog

The Company recognizes revenue when persuasive evidence of an arrangement exists, when the services have been rendered, when the price is determinable, and when collectibility of the amounts due is reasonably assured. For time-and-material contracts, revenue is recognized as hours are incurred and costs are expended. For contracts with progress billing schedules, primarily monthly, revenue is recognized as services are rendered to the client. Revenue for fixed-price contracts is recognized per the proportional method of accounting using an input-based approach. On a given project, actual salary and indirect labor costs incurred are measured and compared against the total estimated costs of such items at the completion of the project. Revenue is recognized based upon the percentage-of-completion calculation of total incurred costs to total estimated costs. The Company infrequently works on fixed-price projects that include significant amounts of material or other non-labor related costs which could distort the percent complete within a percentage-of-completion calculation. The Company's estimate of the total labor costs it expects to incur over the term of the contract is based on the nature of the project and our past experience on similar projects, and includes management judgments and estimates which affect the amount of revenue recognized on fixed-price contracts in any accounting period. Loss on contracts, if any, are recorded at the time it is determined a loss exists on a project.

The Company's revenue from contracts accounted for under time-and-material, progress billing, and percentage-of-completion methods as a percentage of consolidated revenue for the three years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
Time-and-material	85.9 %	86.5 %	88.6 %
Progress billing	10.8 %	10.8 %	9.5 %
Percentage-of-completion	3.3 %	2.7 %	1.9 %
Total	100.0 %	100.0 %	100.0 %

As of December 31, 2017 and 2016, the backlog for fixed-price and all managed-support contracts was approximately $30.4 million and $29.7 million, respectively. Approximately 76% or $23.0 million of the December 31, 2017 backlog is expected to be earned in 2018. Approximately 71% of the $29.7 million of backlog at December 31, 2016, or $21.0 million, was earned in 2017. Revenue is subject to slight seasonal variations, with a minor slowdown and a decrease in billable resource utilization in months of high vacation and legal holidays (July, August, and December). Backlog does not tend to be seasonal; however, it does fluctuate based upon the timing of entry into long-term contracts.

Competition

The IT services market, for both IT solutions and IT staffing services, is highly competitive. The market is also highly fragmented with many providers and no single competitor maintaining clear market leadership. Competition varies by location, the type of service provided, and the client to whom services are provided. The Company's competition comes from four major channels: large national or international companies, including major accounting and consulting firms and large companies headquartered in India; hardware vendors and suppliers of packaged software systems; small local firms or individuals specializing in specific programming services or applications; and from a client's internal IT staff. CTG competes against all four of these channels for its share of the market. The Company believes that to compete successfully it is necessary to have a local geographic presence, offer appropriate IT solutions, provide skilled professional resources, and price its services competitively.

Intellectual Property

The Company has registered its symbol and logo with the U.S. Patent and Trademark Office and has taken steps to preserve its rights in other countries where it operates. We regard patents, trademarks, copyrights and other intellectual property as important to our success, and we rely on them in the United States and foreign countries to protect our investments in products and technology. Our patents expire at various times, but we believe that the loss or expiration of any individual patent would not materially affect our business. We, like any other company, may be subject to claims of alleged infringement of the patents, trademarks and other intellectual property rights of third parties from time to time in the ordinary course of business. CTG has entered into agreements with various software and hardware vendors from time to time in the normal course of business, and has capitalized certain costs under software development projects.

Employees

CTG's business depends on the Company's ability to attract and retain qualified professional staff to provide services to its clients. The Company has a structured recruiting organization that works with its clients to meet their requirements by recruiting and providing high quality, motivated staff. The Company employs approximately 3,200 employees worldwide, with approximately 2,450 in the United States and Canada and 750 in Europe. Of these employees, approximately 2,850 are IT professionals and 350 are individuals who work in sales, recruiting, delivery, administrative and support positions. The Company believes that its relationship with its employees is good. No employees are covered by a collective bargaining agreement or are represented by a labor union. CTG is an equal opportunity employer.

Financial Information About Geographic Areas

The following table sets forth certain financial information relating to the performance of the Company for the three years ended December 31, 2017, 2016, and 2015. This information should be read in conjunction with the audited consolidated financial statements and notes thereto included in Item 8, "Financial Statements and Supplementary Data" included in this report.

	2017	2016	2015
(amounts in thousands)			
Revenue from External Clients:			
United States	$219,886	$253,955	$301,826
Belgium (1)	39,347	35,995	35,931
Luxembourg (2)	36,954	31,441	28,562
Other European country	4,824	3,193	2,814
Other country	199	309	345
Total foreign revenue	81,324	70,938	67,652
Total revenue	$301,210	$324,893	$369,478
Operating Income (loss):			
United States	$(158)	$(35,739)	$8,922
Belgium (1)	$594	$(577)	$(304)
Luxembourg (2)	2,841	2,943	2,720
United Kingdom (3)	596	17	(714)
Other countries	71	9	13
Total foreign operating income	4,102	2,392	1,715
Total operating income (loss)	$3,944	$(33,347)	$10,637
Total Assets:			
United States	$83,499	$91,117	$133,214
Belgium (1)	18,410	14,562	13,904
Luxembourg (2)	22,478	18,842	13,988
Other European country	2,360	1,533	1,838
Other countries	888	861	133
Total foreign assets	44,136	35,798	29,863
Total assets	$127,635	$126,915	$163,077

(1) Revenue, operating income, and assets for our Belgium operations have been disclosed separately as they exceed 10% of the consolidated balances in at least one of the years presented.
(2) Revenue, operating income, and total assets for our Luxembourg operations have been disclosed separately as they exceed 10% of the consolidated balance in at least one of the years presented.
(3) Operating income for our United Kingdom operations has been disclosed separately as it exceeds 10% of the consolidated balance in at least one of the years presented.

Available Company Information

The Company's annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of

1934 (Exchange Act), and reports pertaining to the Company filed under Section 16 of the Exchange Act are available without charge on the Company’s website at www.ctg.com as soon as reasonably practicable after the Company electronically files the information with, or furnishes it to, the SEC. The Company’s code of ethics (Code of Conduct), committee charters and governance policies are also available without charge on the Company’s website at http://investors.ctg.com/corporate-governance. If applicable, the Company intends to disclose future amendments to, or waivers from, certain provisions of the Code of Conduct on the Company's website or in a current report on Form 8-K.

Item 1A. Risk Factors

The following risk factors should be read carefully in connection with evaluating our business and the forward-looking information contained in this Annual Report on Form 10-K. The risk factors below represent what we believe are the known material risk factors with respect to the Company and our business. Any of the following risks could materially adversely affect our business, our operations, the industry in which we operate, our financial position or our future financial results.

Our business depends on the availability of a large number of highly qualified IT professionals, sales and management personnel, and our ability to recruit and retain these individuals.

We actively compete with many other IT service providers for qualified personnel, including professional IT staff, recruiters, sales people, and management. The availability of qualified personnel may affect our future ability to provide services and meet the requirements of our clients. An inability to fulfill client requirements at agreed upon rates due to a lack of available qualified personnel may adversely impact our revenue and operating results in the future.

Increased competition and the bargaining power of our large clients may cause our billing rates to decline, which would have an adverse effect on our revenue and, if we are unable to control our personnel costs accordingly, on our margins and operating results.

We have experienced reductions in the rates we bill some of our larger clients for services due to highly competitive market conditions. Additionally, we actively compete against many other companies for business at both new and existing clients. Billing rate reductions or competitive pressures may lead to a further decline in revenue. When faced with such pressures, if we are unable to make commensurate reductions in our personnel costs, our margins and operating results would be adversely affected.

We derive a significant portion of our revenue from two clients, and a significant reduction in the amount of requirements requested by these clients would have an adverse effect on our revenue and operating results.

IBM and SDI are CTG’s two largest clients. CTG provides services to various IBM divisions in a number of locations. SDI acts as a vendor manager for Lenovo, and all of the Company's revenue generated through SDI relates to CTG employees working at various divisions of Lenovo. During the 2017 third quarter, the National Technical Services Agreement (NTS Agreement) with IBM was extended for two years and now expires on December 31, 2019. In 2017, 2016, and 2015, IBM accounted for $76.4 million or 25.4%, $98.4 million or 30.3%, and $99.2 million or 26.9% of the Company’s consolidated revenue, respectively. SDI accounted for $34.2 million or 11.4%, $34.5 million or 10.6%, and $44.0 million or 11.9% of the Company's consolidated revenue, respectively, during these periods. The Company’s accounts receivable from IBM at December 31, 2017 and 2016 totaled $21.5 million and $28.0 million, respectively, and accounts receivable from SDI totaled $4.7 million and $5.6 million, respectively.

During the 2016 third quarter, the Company was informed by IBM that there would be significant reductions in both requirements and billable rates for certain of the employees provided to this client beginning in the 2016 fourth quarter. Originally, these employee reductions could have totaled as much as 40% of the revenue earned from IBM. However, CTG was able to negotiate to retain a number of these requirements, although many of the retained employees were subject to reductions in billable rates. If IBM or Lenovo were to significantly reduce their requirements for the Company's services in future periods, our revenue and operating results would be adversely affected.

Our client contracts generally have a short term or are terminable on short notice, and a significant number of failures to renew contracts in place, or early terminations or renegotiations of our existing client contracts could adversely affect our results of operations.

Our clients typically retain us on a non-exclusive, engagement-by-engagement basis, rather than under exclusive long-term contracts. We performed 85.9% of our services on a time-and-materials basis during 2017. As such, our clients generally have the right to terminate a contract with us upon written notice without the payment of any financial penalty. Client projects may involve multiple engagements or stages, and there is a risk that a client may choose not to retain us for additional stages of a project, or that a client will cancel or delay additional planned engagements. These terminations, cancellations or delays could result from factors that are beyond our control and are unrelated to our work product or the progress of the project, but could be related to business or financial conditions of the client, changes in client strategies or the economy in general. When contracts are terminated, we lose the anticipated future revenue and we may not be able to eliminate the associated costs required to support those contracts in a timely manner. Consequently, our operating results in subsequent periods may be lower than expected. Our clients can cancel or reduce the scope of their engagements with us on short notice. If they do so, we may be unable to reassign our professionals to new engagements without delay. The cancellation or reduction in scope of an engagement could, therefore, reduce the utilization rate of our professionals, which would have a negative impact on our business, financial condition, and results of operations. As a result of these and other factors, our past financial performance should not be relied on as a guarantee of similar or improved future performance. Due to these factors, we believe that our results from operations in the future may fluctuate from period to period.

The introduction of new IT services or changes in client requirements for IT services may render our existing IT Solutions or IT Staffing offerings obsolete or unnecessary, which, if we are unable to keep pace with these corresponding changes, could have an adverse effect on our business.

Our success depends, in part, on our ability to implement and deliver IT Solutions or IT and other staffing services that anticipate and keep pace with rapid and continuing changes in technology, industry standards and client preferences and requirements. We may not be successful in anticipating or responding to these developments on a timely basis, and our offerings may not be successful in the marketplace. Also, services, solutions and technologies developed by our competitors may make our solutions or staffing offerings uncompetitive or obsolete. Any one of these circumstances could have a material adverse effect on our ability to obtain and successfully complete client engagements.

We could be subject to liability and damage to our reputation resulting from cyber attacks or data breaches.

Cyber risks for companies providing information technology (IT) and professional services, especially in healthcare-related and financial services industries, continue to increase. This increase in risk may be attributed to the value of intellectual property, the value of personal information or data used for identity theft and fraud, the increasing sophistication of attacks, the variety of threat actors and their motives such as organized crime, hackers, terrorists, activists, insider threats, foreign governments, and third parties, and the reliance on electronic communications, mobile technologies, cloud-based resources, smart devices, and emerging technologies. The Company’s operations, business, and its customers rely on the secure processing, transmission, storage and availability of information, services, and resources provided by its IT environments. The Company’s complex IT environments support a variety of technologies, industries, services, delivery teams, and clients globally.

Although the Company has not experienced any prior material data breaches or cyber security incidents, its environments may be impacted by cyber attacks or cyber security incidents caused via the aforementioned threat actors or the Company's personnel. These cyber security incidents could result in information loss, result in the disruption of the Company's internal and client-facing operations and services, adversely affect its adherence with regulatory requirements, or result in a data breach. Information losses and data breaches could include the unauthorized disclosure, misuse, loss, and destruction of both the Company’s and its clients’ intellectual property, financial information, or other regulated or privacy-related information, including but not limited to United States-designated personally identifiable information (PII), personal data under the European General Data Protection Directive (GDPR), and protected health information (PHI) under the United States Health Insurance Portability and Accountability Act of 1996 (HIPAA).

The Company’s failure to protect sensitive data and reasonably address the requirements of regulated data under its control could result in reputational damage, fines and penalties, litigation costs, external investigations, compensation costs including reimbursement and monetary awards, and/or additional compliance costs which could have a material, adverse impact on the Company's operations. It could also have an adverse impact on the Company’s ability to maintain and execute new contracts with clients that produce or work with similar data, and make it more difficult to retain and recruit qualified personnel to perform its services in the future. As the cyber threat landscape continues to evolve or the Company’s cyber risk profile changes, it may be required to expend additional resources to implement new or enhance existing risk mitigation strategies.

The foreign currency exchange, legislative, tax, regulatory and economic risks associated with international operations could have an adverse effect on our operating results if we are unable to mitigate or hedge these risks.

We have operations in the United States and Canada in North America, in Belgium, Luxembourg, and the United Kingdom in Europe, and in India. Although our foreign operations conduct their business in their local currencies, these operations are subject to their own currency fluctuations, legislation, employment and tax law changes, and economic climates. These factors as they relate to our foreign operations are different than those of the United States. Although we actively manage these foreign operations with local management teams, our overall operating results may be negatively affected by local economic conditions, changes in foreign currency exchange rates, or tax, regulatory or other economic changes beyond our control.

Government cuts in healthcare programs, such as Medicare, and delays in legislative or regulatory healthcare mandates could cause a reduction in IT spending by our healthcare clients, which could materially and adversely affect our revenue and results of operations.

The Company's growth efforts have previously been primarily focused in the healthcare market. Growth in this market depends on continued spending by our healthcare clients on IT projects. Cuts in government healthcare programs, such as sequestration, which cut Medicare reimbursements to hospitals and health systems beginning in April 2013, may result in reduced expenditures by our healthcare clients on IT projects. If additional government cuts in healthcare programs were to occur, whether due to the failure of Congress to adopt a budget, pass appropriations bills or raise the U.S. debt ceiling or for other reasons, there may be delays, reductions or cessation of funding to our clients, which could cause our clients to purchase less IT services from us, which could materially and adversely affect our revenue and results of operations.

In addition, delays in implementation of legislative or regulatory healthcare mandates could adversely affect the IT spending by our healthcare clients to implement such mandates. If the implementation of existing or contemplated legislative or regulatory healthcare mandates are deferred, the resulting reduction in IT spending by our healthcare clients could materially and adversely affect our revenue and results of operations.

Changes in government regulations and laws affecting the IT services industry, and the industries in which our clients operate, including accounting principles and interpretations, and the taxation of domestic operations could adversely affect our results of operations.

Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the Patient Protection and Affordable Care Act (PPACA), and new SEC regulations, create uncertainty for companies such as ours. These new or updated laws, regulations and standards are subject to varying interpretations which, in many instances, is due to their lack of specificity. As a result, the application of these new standards and regulations in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We are committed to maintaining high standards of corporate governance and public disclosure. As a result, our efforts to comply with evolving laws, tax regulations and other standards 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 continuing efforts to comply with Section 404 of the Sarbanes-Oxley Act of 2002 and the related regulations regarding our required assessment of our internal controls over financial reporting and our independent auditors' audit of internal control require the commitment of significant internal, financial and managerial resources.

The Financial Accounting Standards Board (FASB), the SEC, and the Public Company Accounting Oversight Board (PCAOB) or other accounting rule making authorities have issued and may continue to issue new accounting rules or auditing standards that are different than those that we presently apply to our financial results. Such new accounting rules or auditing standards could require significant changes from the way we currently report our financial condition, results of operations or cash flows.

U.S. generally accepted accounting principles have been the subject of frequent changes in interpretations. As a result of the enactment of the Sarbanes-Oxley Act of 2002 and the review of accounting policies by the SEC as well as by national and international accounting standards bodies, the frequency of future accounting policy changes may accelerate. Such future changes in financial accounting standards may have a significant effect on our reported results of operations, including results of transactions entered into before the effective date of the changes.

We are subject to income and other taxes in the United States (federal and state) and numerous foreign jurisdictions. Our provisions for income and other taxes and our tax liabilities in the future could be adversely affected by numerous factors. These factors include, but are not limited to, income before taxes being lower than anticipated in countries with lower statutory tax rates and higher than anticipated in countries with higher statutory tax rates, changes in the valuation of deferred tax assets and liabilities, and changes in various federal, state and international tax laws, regulations, accounting principles or interpretations thereof, which could adversely impact our financial condition, results of operations and cash flows in future periods. Due to the enactment of the Tax Cuts and Jobs Act, the Company recorded an additional $1.7 million of tax expense upon enactment. There could be additional estimates related to the Tax Cuts and Jobs Act that could adversely affect our future financial position.

Existing and potential clients may outsource or consider outsourcing their IT requirements to foreign countries in which we may not currently have operations, which could have an adverse effect on our ability to obtain new clients or retain existing clients.

In recent years, more companies have started using, or are considering using, low-cost offshore outsourcing centers to perform technology-related work and complete projects. Currently, we have partnered with clients to perform services outside of North America to mitigate and reduce this risk to our Company. However, the risk of additional outsourcing of IT solutions overseas to countries where we do not have operations could have a material, negative impact on our future operations.

Decreases in demand for IT Solutions and IT and Other Staffing services in the future would cause an adverse effect on our revenue and operating results.

The Company's revenue and operating results are significantly affected by changes in demand for its services. In the past, when the world economy deteriorated, such as in 2008, there was a significant decline in demand for the Company's services which negatively affected the Company's revenue and operating results as compared with prior years. Declines in demand for the requirement for our IT services in 2018 or future years would adversely affect our operating results as it has in the past.

The IT services industry is highly competitive and fragmented, which means that our clients have a number of choices for providers of IT services and we may not be able to compete effectively.

The market for our services is highly competitive. The market is fragmented, and no company holds a dominant position. Consequently, our competition for client requirements and experienced personnel varies significantly by geographic area and by the type of service provided. Some of our competitors are larger and have greater technical, financial, and marketing resources and greater name recognition than we have in the markets we collectively serve. In addition, clients may elect to increase their internal IT systems resources to satisfy their custom software development and integration needs. Finally, our industry is being impacted by the growing use of lower-cost offshore delivery capabilities (primarily India and other parts of Asia). There can be no assurance that we will be able to continue to compete successfully with existing or future competitors or that future competition will not have a material adverse effect on our results of operations and financial condition.

If we are unable to collect our receivables or unbilled services, our results of operations, financial condition and cash flows could be adversely affected.

Our business depends on our ability to successfully obtain payment from our clients of the amounts they owe us for work performed. We evaluate the financial condition of our clients and typically bill and collect on reasonable cycles. We might, however, not accurately assess the creditworthiness of our clients, or macroeconomic conditions could also result in financial difficulties for our clients, including bankruptcy and insolvency. In certain industries, some clients have requested longer payment terms, which has adversely affected, and may continue to adversely affect, our cash flows. The timely collection of client balances also depends on our ability to complete our contractual commitments as required. If we are unable to meet our commitments or bill our clients on a timely basis, our results of operations and cash flows could be adversely affected. We have established allowances for losses of receivables and unbilled services where we deem the amounts to be uncollectible. The uncollectible amounts due to the Company from clients could differ from those that we currently anticipate.

Our share price could fluctuate and be difficult to predict.

Our share price has fluctuated in the past and could continue to fluctuate in the future in response to various factors, both external and internal. These factors include:

- changes in macroeconomic or political factors unrelated to our business in the geographies in which we operate;
- general or industry-specific market conditions or changes in financial markets;
- our failure to meet our growth or financial objectives (including revenue, operating margins, and earnings per share targets);
- our ability to generate cash flow to return cash to our shareholders at historical levels or levels expected by our shareholders;

- announcements by us or competitors about developments in our business or prospects; and
- projections or speculation about our business by the media or investment analysts.

If we repatriate our cash balances from our foreign operations, we may be subject to additional tax liabilities.

We earn a portion of our operating income outside of the United States, and any repatriation or deemed repatriation of funds currently held in foreign jurisdictions to the United States may result in additional tax liabilities for the Company. In addition, there have been changes to the tax laws in the United States that significantly impact how United States-based multinational corporations are taxed on foreign earnings. Any further changes in these tax laws could have a material adverse impact on our tax expense and cash flows.

Ineffective internal controls could impact the Company's business and operating results.

The Company's internal control over financial reporting may not prevent or detect misstatements because of the inherent limitations of internal controls, including the possibility of human error, the circumvention or overriding of controls, poorly designed or ineffective controls, or fraud. Internal controls that are deemed to be effective can provide only reasonable assurance with respect to the preparation and fair presentation of the Company's financial statements. If the Company fails to maintain the adequacy of its internal controls, including the failure to implement new or improve existing controls, or fails to properly execute or properly test these controls, the Company's business and operating results could be negatively impacted and the Company could fail to meet its financial reporting obligations.

Changing economic conditions and the effect of such changes on accounting estimates could have a material impact on our results of operations.

The Company has also made a number of estimates and assumptions relating to the reporting of its assets and liabilities and the disclosure of contingent assets and liabilities to prepare its consolidated financial statements pursuant to the rules and regulations of the SEC and other accounting rulemaking authorities. Such estimates primarily relate to the valuation of stock options for recording equity-based compensation expense, allowances for doubtful accounts receivable, investment valuation, discount rates associated with pension plans, incurred but not recorded claims related to the Company's self-insured medical plan, valuation allowances for deferred tax assets, legal matters, other contingencies and estimates of progress toward completion and direct profit or loss on contracts, as applicable. As future events and their effects cannot be determined with precision, actual results could differ from these estimates. Changes in the economic climates in which the Company operates may affect these estimates and will be reflected in the Company’s financial statements in the event they occur. Such changes could result in a material impact on the Company’s results of operations.

Risks to the Company from acquisitions include integration challenges, disruptions of the Company's core business, a failure to achieve objectives, and the assumption of liabilities.

The Company regularly evaluates acquisitions to aid the Company's growth in revenue and profits by expanding the services the Company offers in the geographies in which the Company operates, and its client base. On February 15, 2018, the Company acquired 100% of the equity of Soft Company. Soft Company, located in Paris, France, is an IT consulting company that specializes in providing IT services to finance, insurance, telecom, and media services companies. Acquisitions often present significant challenges and risks relating to the integration of the business into the Company, and there can be no assurances that the Company will manage future acquisitions successfully, that the Company's core business will not be significantly disrupted after an acquisition is finalized, or that strategic acquisition opportunities will be available to the Company on acceptable terms. The risks from an acquisition include the Company failing to achieve strategic objectives and anticipated revenue and profit improvements, borrowing a significant amount of money to fund the acquisitions which creates financial stress for the Company's operations, as well as failing to retain the key personnel of the acquired business. Finally, the assumption of liabilities related to litigation or other legal proceedings involving the acquired business may present a significant risk.

We may require additional capital to support our business, and this capital may not be available to us on acceptable terms, if at all.

On December 21, 2017, the Company entered into a credit and security agreement, which provides for a three-year revolving credit facility in an aggregate principal amount of $45.0 million, including a sublimit of $10.0 million for letters of credit and a $10.0 million sublimit for swing line loans. At December 31, 2017, we had $4.4 million of borrowings outstanding under our revolving credit line. We may be dependent on our revolving credit facility to meet working capital and operational requirements, and access to our facility is dependent on, among other things, compliance with applicable covenants, including fixed charge coverage ratio, consolidated earnings before interest, taxes, depreciation, and amortization (EBITDA) targets, and a limit on annual expenditures for property, plant, equipment, and capitalized software. The fixed charge coverage ratio is only tested if availability on a measurement date is below a threshold. The amount available for borrowing under the credit facility could be significantly reduced due to poor operational performance, or other factors. Any loss or material reduction of our ability to access funds under the credit facility could materially and negatively impact our liquidity.

Actions of activist stockholders could cause us to incur substantial costs, divert management's and the board's attention and resources, and have an adverse effect on our business and stock price.

From time to time, we may be subject to proposals by stockholders urging us to take certain corporate actions. If activist stockholder activities ensue, our business could be adversely affected as responding to proxy contests and reacting to other actions by activist stockholders can be costly and time-consuming, disrupt our operations, and divert the attention of management and our board of directors, all of which could interfere with our ability to execute our strategic plan. We may be required to retain the services of various professionals to advise us on activist stockholder matters, including legal, financial and communications advisors, the costs of which may negatively impact our future financial results. In addition, the perceived uncertainties as to our future direction, strategy or leadership created as a consequence of activist stockholder initiatives may result in the loss of potential business opportunities, harm our ability to attract new investors, customers, and employees, and cause our stock price to experience periods of volatility or stagnation.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

At December 31, 2017, the Company owned its headquarters building at 800 Delaware Avenue, and a corporate administrative building at 700 Delaware Avenue, both located in Buffalo, New York. These buildings are operated by CTG of Buffalo, a subsidiary of the Company which is part of the Company's North American operations. The corporate headquarters consists of approximately 48,000 square feet and is occupied by corporate administrative operations. The corporate administrative building consists of approximately 42,000 square feet. During the 2017 third and fourth quarter, the Company consolidated its corporate administrative operations into its corporate headquarters building at 800 Delaware Avenue. At December 31, 2017, these properties were not used as collateral as part of the Company's existing revolving credit agreement.

The Company sold its corporate administrative building in February 2018 for $1.8 million, and as the book value was $1.6 million, recorded an immaterial gain on the sale.

All of the remaining Company locations, totaling approximately 20 sites, are leased facilities. Most of these facilities are located in the United States, with approximately four of these locations in Europe in the countries of Belgium, Luxembourg and the United Kingdom, where our European operations are located, and one in Hyderabad, India. These facilities generally serve as sales and support offices and their size varies with the number of people employed at each office, ranging from 300 to 26,000 square feet. The Company’s lease terms vary from periods of less than a year to five years and typically have flexible renewal options. The Company believes that its presently owned and leased facilities are adequate to support its current and anticipated future needs.

Item 3. Legal Proceedings

The Company and its subsidiaries are involved from time to time in various legal proceedings arising in the ordinary course of business. Although the outcome of lawsuits or other proceedings involving the Company and its subsidiaries cannot be predicted with certainty and the amount of any liability that could arise with respect to such lawsuits or other proceedings cannot be predicted accurately, management does not expect these matters, if any, to have a material adverse effect on the financial position, results of operations, or cash flows of the Company.

Item 4. Mine Safety Disclosures
Not applicable.

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Stock Market Information

The Company’s common stock is traded on The NASDAQ Stock Market LLC under the symbol CTG. The following table sets forth the high and low sales prices for the Company’s common stock for each quarter of the previous two years.

Stock Price	High	Low
Year Ended December 31, 2017		
Fourth Quarter	$5.59	$4.90
Third Quarter	$6.04	$5.04
Second Quarter	$6.30	$5.25
First Quarter	$6.33	$4.20
Year Ended December 31, 2016		
Fourth Quarter	$4.99	$3.87
Third Quarter	$5.54	$4.42
Second Quarter	$5.69	$4.90
First Quarter	$6.71	$4.70

On March 2, 2018, there were 2,022 holders of record of the Company’s common shares. The Company paid a quarterly dividend for the first three quarters of 2016. The dividend was suspended in the 2016 fourth quarter and no dividends were paid in 2017. At December 31, 2017, as per the Company's revolving line of credit, the Company is required to meet certain financial covenants in order to pay dividends. The Company was in compliance with these financial covenants at both December 31, 2017 and 2016. For additional information regarding these financial covenants, see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Financial Condition and Liquidity." The determination of the timing, amount and the payment of dividends, if any, on the Company’s common stock in the future is at the discretion of the Board of Directors and will depend upon, among other things, the Company’s profitability, liquidity, financial condition, capital requirements, and compliance with the covenants under the Company's revolving credit agreement.

For information concerning common stock issued in connection with the Company’s equity compensation plans, see Item 12, “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.”

Issuer Purchases of Equity Securities

During the 2016 fourth quarter, the Company’s Board of Directors authorized the repurchase of up to $10.0 million of its stock over the next two years. This share repurchase authorization replaces the Company’s previous share repurchase program. During the 2017 fourth quarter, the Company’s Board of Directors approved a $10.0 million addition to the stock repurchase program to bring the authorization to $20.0 million in total. As of February 16, 2018, the Company had repurchased approximately $7.3 million of shares pursuant to the authorization. On February 15, 2018, the Company announced its intent to commence in the future a modified “Dutch auction” tender offer to repurchase up to 10% of its outstanding shares of common stock. The information below does not include shares withheld by or surrendered to the Company either to satisfy the exercise cost for the cashless exercise of employee stock options, or to satisfy tax withholding obligations associated with employee equity awards as the number of shares is minor.

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 Dollar Amount that May Yet be Purchased Under the Plans Or Programs
September 30 - October 27	26,266	$ 5.36	26,266	$13,820,929
October 28 - November 24	132,542	$ 5.10	132,542	$13,144,383
November 25 - December 31	93,598	$ 5.17	93,598	$12,660,719
Total	252,406	$ 5.15	252,406	

* Excludes broker commissions

Company Performance Graph

The following graph displays a five-year comparison of cumulative total shareholder returns for the Company's common stock, the S&P 500 Index, and the Dow Jones U.S. Computer Services Index, assuming a base index of $100 at the end of 2012. The cumulative total return for each annual period within the five years presented is measured by dividing (1) the sum of (A) the cumulative amount of dividends for the period, assuming dividend reinvestment, and (B) the difference between the Company's share price at the end and the beginning of the period by (2) the share price at the beginning of the period. The calculations were made excluding trading commissions and taxes.

	Base Period	Indexed Returns Years Ending				
	December 2012	December 2013	December 2014	December 2015	December 2016	December 2017
Computer Task Group, Inc.	$ 100.00	$ 104.36	$ 53.82	$ 38.70	$ 25.52	$ 30.92
S&P 500 Index	$ 100.00	$ 132.39	$ 150.51	$ 152.59	$ 170.84	$ 208.14
Dow Jones U.S. Computer Services Index	$ 100.00	$ 106.26	$ 100.62	$ 98.18	$ 115.31	$ 127.33

The information included under this section entitled "Company Performance Graph" is deemed not to be "soliciting material" or "filed" with the SEC, is not subject to the liabilities of Section 18 of the Exchange Act, and shall not be deemed incorporated by reference into any of the filings previously made or made in the future by the Company under the Exchange Act or the Securities Act of 1933, except to the extent the Company specifically incorporates any such information into a document that is filed.

Item 6. Selected Financial Data
Consolidated Summary—Five-Year Selected Financial Information

The selected operating data and financial position information set forth below for each of the years in the five-year period ended December 31, 2017 has been derived from the Company's audited consolidated financial statements. This information should be read in conjunction with the audited consolidated financial statements and notes thereto included in Item 8, "Financial Statements and Supplementary Data" included in this report.

(amounts in millions, except per-share data)	2017 (1)	2016 (2)	2015 (3)	2014 (4)	2013
Operating Data					
Revenue	$301.2	$324.9	$369.5	$393.3	$419.0
Operating income (loss)	$3.9	$(33.3)	$10.6	$17.2	$24.7
Net income (loss)	$0.8	$(34.6)	$6.5	$10.4	$15.7
Basic net income (loss) per share	$0.05	$(2.22)	$0.42	$0.68	$1.02
Diluted net income (loss) per share	$0.05	$(2.22)	$0.41	$0.64	$0.92
Cash dividend per share	$—	$0.18	$0.24	$0.24	$0.20
Financial Position					
Working capital	$50.8	$53.7	$53.0	$69.2	$67.5
Total assets	$127.6	$126.9	$163.1	$170.2	$174.4
Long-term debt	$4.4	$4.7	$1.2	$—	$—
Shareholders' equity	$78.6	$78.8	$117.7	$111.0	$113.8

(1) During 2017, the Company incurred $1.2 million of unexpected costs associated with the Company's self-insured medical plan, and $0.8 million for severance charges for former executives, which reduced operating income by a total of $2.0 million. Additionally, the Company was impacted by the enactment of the Tax Cuts and Jobs Act, which resulted in the Company recording an additional $1.7 million of tax expense upon enactment. Finally, the Company recorded a $0.4 million gain from non-taxable life insurance for a former executive that passed away in 2017. These charges decreased net income by a net amount of $2.5 million and basic and diluted loss per share by $0.17.

(2) During 2016, the Company incurred $37.3 million related to goodwill impairment charges, and $1.5 million for severance charges for two former executives, which reduced operating income by a total of $38.8 million. These charges increased net loss by $38.3 million and basic and diluted loss per share by $2.45.

(3) During 2015, the Company incurred approximately $1.1 million of costs relating to the disposal of one of the Company's capitalized software projects. The Company also incurred approximately $1.2 million of costs relating to severance charges in Europe. In total, these costs reduced operating income by $2.3 million, net income by $1.2 million, and basic and diluted net income per share by $0.08.

Included in net income is $0.2 million from a non-taxable life insurance gain for a former executive that passed away in 2015.

(4) During 2014, the Company incurred $2.0 million in costs associated with the death of the Company's Chairman and CEO under his employment agreement. The Company also recorded an impairment charge totaling $1.5 million for capitalized software costs associated with one of its IT solutions. In total, these costs reduced operating income by $3.5 million, net income by $2.2 million, and basic and diluted net income per share by $0.14 and $0.13, respectively.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations
Forward-Looking Statements

This annual report on Form 10-K contains forward-looking statements made by the management of Computer Task Group, Incorporated (CTG, the Company or the Registrant) that are subject to a number of risks and uncertainties. These forward-looking statements are based on information as of the date of this report. The Company assumes no obligation to update these statements based on information from and after the date of this report. Generally, forward looking statements include words or phrases such as “anticipates,” “believes,” “estimates,” “expects,” “intends,” “plans,” “proj “could,” “may,” “might,” “should,” “will” and words and phrases of similar impact. The forward-looking statements include, b are not limited to, statements regarding future operations, industry trends or conditions and the business environment, and statements regarding future levels of or trends in business strategy and expectations, new business opportunities, cost control initiatives, business wins, market demand, revenue, operating expenses, capital expenditures, and financing. The forward-looking statements are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Numerous factors could cause actual results to differ materially from those in the forward-looking statements, including the following: (i) the availability to CTG of qualified professional staff, (ii) domestic and foreign industry competition for clients and talent, including technical, sales and management personnel, (iii) increased bargaining power of large clients, (iv) the Company's ability to protect confidential client data, (v) the partial or complete loss of the revenue the Company generates from International Business Machines Corporation (IBM) and SDI International (SDI), (vi) the uncertainty of clients' implementations of cost reduction projects, (vii) the effect of healthcare reform and initiatives, (viii) the mix of work between staffing and solutions, (ix) currency exchange risks, (x) risks associated with operating in foreign jurisdictions, (xi) renegotiations, nullification, or breaches of contracts with clients, vendors, subcontractors or other parties, (xii) the impact of current and future laws and government regulation, as well as repeal or modification of such, affecting the information technology (IT) solutions and staffing industry, taxes and the Company's operations in particular, (xiii) industry and economic conditions, including fluctuations in demand for IT services, (xiv) consolidation among the Company's competitors or clients, (xv) the need to supplement or change our IT services in response to new offerings in the industry or changes in client requirements for IT products and solutions, (xvi) the risks associated with acquisitions, (xvii) actions of activist shareholders, and (xviii) the risks described in Item 1A of this annual report on Form 10-K and from time to time in the Company's reports filed with the Securities and Exchange Commission (SEC).

Industry Trends

The market demand for the Company’s services is heavily dependent on IT spending by major corporations, organizations and government entities in the markets and regions that we serve. The pace of technology advances and changes in business requirements and practices of our clients all have a significant impact on the demand for the services that we provide. Competition for new engagements and pricing pressure has been strong. In 2017 there was a further overall decline in demand for our services as compared with 2016 and 2015 as many of our healthcare clients did not begin new projects when existing projects ended due to their capital constraints. Additionally, the demand for our IT staffing and other services from certain of our large staffing clients diminished throughout 2017.

The Company primarily operates in one industry segment, providing IT services to its clients. These services include IT solutions and IT and other staffing. With IT solutions services, we generally take responsibility for the deliverables on a project and the services may include high-end consulting. When providing IT and other staffing services, we typically supply personnel to our clients who then, in turn, take their direction from the client’s managers. The Company at times provides administrative or warehouse employees to clients to supplement the IT staffing resources we place at those clients.

IT solutions and IT and other staffing revenue as a percentage of consolidated revenue for the years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
IT solutions	30 %	29 %	33 %
IT and other staffing	70 %	71 %	67 %
Total	100 %	100 %	100 %

The Company promotes a majority of its services through five vertical market focus areas: technology service providers, manufacturing, healthcare (which includes services provided to healthcare providers, health insurers (payers), and life sciences companies), financial services, and energy. The remainder of CTG's revenue is derived from general markets.

CTG's revenue by vertical market as a percentage of consolidated revenue for the years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
Technology service providers	33.1 %	35.2 %	31.1 %
Manufacturing	24.3 %	24.2 %	25.7 %
Healthcare	16.8 %	18.2 %	23.5 %
Financial services	9.1 %	7.8 %	7.2 %
Energy	5.0 %	5.3 %	5.4 %
General markets	11.7 %	9.3 %	7.1 %
Total	100.0 %	100.0 %	100.0 %

The IT services industry is extremely competitive and characterized by continuous changes in client requirements and improvements in technologies. Our competition varies significantly by geographic region, as well as by the type of service provided. Many of our competitors are larger than CTG, and have greater financial, technical, sales and marketing resources. In addition, the Company frequently competes with a client's own internal IT staff. Our industry is being impacted by the growing use of lower-cost offshore delivery capabilities (primarily India and other parts of Asia). There can be no assurance that we will be able to continue to compete successfully with existing or future competitors or that future competition will not have a material adverse effect on our results of operations and financial condition.

Revenue Recognition

The Company recognizes revenue when persuasive evidence of an arrangement exists, when the services have been rendered, when the price is determinable, and when collectibility of the amounts due is reasonably assured. For time-and-material contracts, revenue is recognized as hours are incurred and costs are expended. For contracts with progress billing schedules, primarily monthly, revenue is recognized as services are rendered to the client. Revenue for fixed-price contracts is recognized per the proportional method of accounting using an input-based approach. On a given project, actual salary and indirect labor costs incurred are measured and compared against the total estimated costs of such items at the completion of the project. Revenue is recognized based upon the percentage-of-completion calculation of total incurred costs to total estimated costs. The Company infrequently works on fixed-price projects that include significant amounts of material or other non-labor related costs which could distort the percent complete within a percentage-of-completion calculation. The Company's estimate of the total labor costs it expects to incur over the term of the contract is based on the nature of the project and our past experience on similar projects, and includes management judgments and estimates which affect the amount of revenue recognized on fixed-price contracts in any accounting period.

The Company's revenue from contracts accounted for under time-and-material, progress billing, and percentage-of-completion methods as a percentage of consolidated revenue for the years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
Time-and-material	85.9 %	86.5 %	88.6 %
Progress billing	10.8 %	10.8 %	9.5 %
Percentage-of-completion	3.3 %	2.7 %	1.9 %
Total	100.0 %	100.0 %	100.0 %

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Results of Operations

The table below sets forth percentage information calculated as a percentage of consolidated revenue as reported on the Company’s consolidated statements of operations as included in Item 8, “Financial Statements and Supplementary Data” in this report.

Year Ended December 31,	2017		2016		2015	
(percentage of revenue)						
Revenue	100.0	%	100.0	%	100.0	%
Direct costs	81.4	%	81.8	%	81.8	%
Selling, general and administrative expenses	17.3	%	17.0	%	15.3	%
Goodwill impairment charges	—		11.5	%	—	%
Operating income (loss)	1.3	%	(10.3	)%	2.9	%
Interest and other income (expense), net	0.1	%	(0.1	)%	—	%
Income (loss) before income taxes	1.4	%	(10.4	)%	2.9	%
Provision for income taxes	1.1	%	0.3	%	1.1	%
Net income (loss)	0.3	%	(10.7	)%	1.8	%

2017 as compared with 2016

The Company recorded revenue in 2017 and 2016 as follows:

Year Ended December 31,	% of total		2017	% of total		2016	Year-Over-Year Change	
(dollars in thousands)								
North America	73.1	%	$220,085	78.3	%	$254,264	(13.4	)%
Europe	26.9	%	81,125	21.7	%	70,629	14.9	%
Total	100.0	%	$301,210	100.0	%	$324,893	(7.3	)%

Reimbursable expenses billed to clients and included in revenue totaled $3.3 million and $4.0 million in 2017 and 2016, respectively. The decrease in reimbursable expenses year-over-year is primarily due to a reduction in the number of consultants in our healthcare vertical market, as many of those employees travel to client locations to perform services.

The revenue decrease in North America in 2017 as compared with 2016 was primarily due to a significant decrease in demand for the Company's IT staffing business, primarily in our technology service provider vertical market, and a decrease in demand for our IT solutions services business, primarily in our healthcare vertical market. The revenue increase in Europe is primarily due to strong demand for the Company’s services in the European markets we serve.

On a consolidated basis, IT solutions revenue decreased $3.3 million or 3.5% in 2017 as compared with 2016. Beginning in late 2014, the Company began to see significant reductions in billable resources at a number of its larger healthcare clients which decreased IT solutions revenue in the Company's healthcare vertical market as existing electronic health records (EHR) projects came to an end. This decrease in spending on healthcare IT projects continued throughout 2017 for the clients that we serve. As part of our strategy to shift to non-EHR services, the Company expanded its healthcare IT business development team in 2017 with individuals who have experience selling healthcare IT services such as advisory and technical services, outsourcing, and staff augmentation. However, in 2017 this team as a whole was not successful in reducing our revenue losses in this vertical market and expanding the non-EHR healthcare related services we provide.

Also on a consolidated basis, IT and other staffing revenue decreased $20.3 million or 8.8% during 2017 as compared with 2016. The IT staffing decrease was primarily due to a decrease in demand from a number of the Company's largest staffing clients. Additionally, there was a significant reduction in both requirements and billable rates for certain of the employees provided to our largest staffing client which began to impact the Company in the 2016 fourth quarter.

The Company’s headcount was approximately 3,200 employees at December 31, 2017, which was a 7% decrease from approximately 3,450 employees at December 31, 2016. Approximately 90% of this headcount is for technical resources and 10% for support positions.

The significant increase in revenue in the Company’s European operations in 2017 as compared with the corresponding 2016 period was due to an increase in demand for the Company’s IT solutions services across a number of the vertical markets we serve and the strength relative to the U.S. dollar of the currencies in Belgium and Luxembourg, partially offset by weakness relative to the U.S. dollar of the currency of the United Kingdom, the countries in which the Company's European subsidiaries operate. In Belgium and Luxembourg, the functional currency is the Euro, while in the United Kingdom the functional currency is the British Pound. In 2017 as compared with 2016, the average value of the Euro increased 2.1%, and the average value of the British Pound decreased 4.9%. A significant portion of the Company's revenue from its European operations is generated in Belgium and Luxembourg. Had there been no change in these exchange rates from 2016 to 2017, total European revenue would have been approximately $1.4 million lower, or $79.7 million as compared with the $81.1 million reported. When considering the year-over-year change in revenue in constant currencies, revenue from our European operations increased 12.9%. Operating income increased by less than $0.1 million in 2017 as compared with 2016 given the change in the exchange rates year-over-year.

The Company continues to assess the potential impact, if any, that the United Kingdom's proposed exit from the European Union will have on the Company's operations. As the total revenue generated by our British subsidiary is immaterial when compared with the Company's total consolidated revenue, we do not expect the impact of the pending exit to have a material impact on the Company's operations.

International Business Machines Corporation (IBM) was CTG's largest client and accounted for $76.4 million or 25.4% and $98.4 million or 30.3% of the Company's consolidated revenue in 2017 and 2016, respectively. During the 2017 third quarter, the National Technical Services Agreement with IBM was extended for two years and now expires on December 31, 2019. As part of the National Technical Services Agreement, the Company also provides its services as a predominant supplier to IBM's Integrated Technology Services and the Systems and Technology Group business units. This agreement accounted for approximately 85% of all of the services provided to IBM by the Company in 2017. As previously mentioned, the reduction in revenue in 2017 as compared with 2016 is due to a reduction in both the number of requirements and bill rates for certain employees provided to this client beginning in the 2016 fourth quarter. The Company's accounts receivable from IBM at December 31, 2017 and 2016 totaled $21.5 million and $28.0 million, respectively.

SDI was the Company's second largest client and accounted for $34.2 million or 11.4% and $34.5 million or 10.6% of the Company's consolidated revenue in 2017 and 2016, respectively. SDI acts as a vendor manager for Lenovo, and all of the Company's revenue generated through SDI relates to CTG employees working at Lenovo. The Company's accounts receivable from SDI at December 31, 2017 and 2016 totaled $4.7 million and $5.6 million, respectively.

We expect to continue to derive a significant portion of our revenue from IBM and SDI in future years; however a significant decline or the loss of the revenue from these clients would have a significant negative effect on our operating results. No other client accounted for more than 10% of the Company's revenue in 2017 or 2016.

Direct costs, defined as costs for billable staff including billable out-of-pocket expenses, were 81.4% and 81.8% of consolidated revenue in 2017 and 2016, respectively. In the 2017 third quarter, the Company recorded a significant increase in fringe benefit costs primarily consisting of medical expense. The increase in medical expense, which totaled approximately $1.0 million in direct costs, was due to much higher utilization of the Company's self-insured medical plan during the year. The Company also recorded $0.4 million of severance charges in the 2017 second quarter. In the 2016 second quarter, the Company's European operations recorded a payroll tax credit totaling approximately $0.7 million which reduced direct costs in 2016. The credited amounts returned certain costs incurred from 2011 to 2014, and the Company does not anticipate a significant credit in the future. When considering these items, direct costs as a percentage of revenue in 2017 decreased as compared with 2016. This decrease was in part due to the significant reduction in IT staffing revenue. These services are provided to the Company's largest IT staffing clients, which have much higher direct costs as a percentage of revenue as compared with the Company's IT solutions clients.

Selling, general and administrative (SG&A) expenses were 17.3% of revenue in 2017 as compared with 17.0% of revenue in 2016. The increase in SG&A expenses as a percentage of revenue in 2017 as compared with 2016 is primarily due to costs incurred by our operating units as the Company continues to make investments in sales, recruiting and delivery resources in order to focus on the Company’s long-term growth, and the loss of operating leverage from a decrease in revenue. Additionally, severance incurred for the resignation of three former executives totaled $0.4 million and $1.5 million in 2017 and 2016, respectively.

During the 2016 first quarter, the Company determined that a goodwill impairment indicator existed which required an interim impairment analysis. As a result of the analysis, the Company determined the implied fair value of its goodwill balance was below the carrying value. Accordingly, the Company recorded a non-tax deductible goodwill impairment charge of $21.5 million to reduce the value of its goodwill balance to the implied fair value. Additionally, during the 2016 third quarter, the Company determined that another goodwill impairment indicator existed which required a second interim impairment analysis. As a result of the analysis, the Company determined the implied fair value of its goodwill balance was again below the carrying value. Accordingly, the Company recorded a non-tax deductible goodwill impairment charge of $15.8 million to reduce the value of its goodwill balance to the implied fair value, which reduced the Company's goodwill balance to $0.0.

The significant increase in operating income in 2017 was due to the goodwill impairment charges taken in the 2016 first and third quarters totaling $37.3 million. Operating income (loss) was 1.3% of revenue in 2017 as compared with (10.3)% of revenue in 2016. Operating loss from North American operations was reduced by $1.2 million of unexpected costs associated with the Company's self-insurance medical plan, and $0.8 million for severance charges for former executives, or $2.0 million in total, and was $0.1 million in 2017 compared with $35.7 million in 2016.

Operating income from our European operations was $4.0 million in 2017 compared with $2.4 million in 2016. The increase in operating income in 2017 compared with 2016 is primarily due to an increase in revenue due to strong demand for the Company's services in the European markets we serve. The 2016 results in Europe were reduced by a goodwill impairment charge of approximately $1.7 million, offset by a payroll tax credit of $0.7 million recorded in the 2016 second quarter.

Other income (expense) was 0.1% of revenue in 2017 and (0.1)% of revenue in 2016. In 2017, the Company recorded a non-taxable life insurance gain of approximately $0.4 million as one of its former executives passed away in the 2017 fourth quarter.

The Company's effective tax rate (ETR) is calculated based upon the full year's operating results and various tax related items. The Company's normal ETR ranges from 38% to 40%. The ETR in 2017 was 80.1%, while the 2016 ETR was (3.3)%.

The ETR was higher than the normal range in 2017 primarily due to the effects of the Tax Cuts & Jobs Act which resulted in the Company reducing its U.S. deferred tax assets by $1.7 million and the adoption of ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting," which required the Company to record approximately $0.3 million in 2017 of additional tax expense for shortfalls that would previously have been recorded to capital in excess of par value on the Company's consolidated balance sheet. This additional tax expense was partially offset by tax benefits for the Work Opportunity Tax Credit (WOTC) and Research and Development tax credit (R&D).

The ETR was lower than the normal range in 2016 primarily due to the non-deductible goodwill impairment charges totaling $37.3 million in the 2016 first and third quarters, and also due to the extension of the Work Opportunity Tax Credit (WOTC) and the Research and Development tax credit (R&D) which were renewed by the U.S. federal government in the 2015 fourth quarter and were effective for all of 2016. These credits totaled approximately $0.6 million.

Net income for 2017 was 0.3% of revenue or $0.05 per diluted share, compared with net loss of (10.7)% of revenue or $(2.22) per diluted share in 2016. Diluted earnings per share were calculated using 15.3 million weighted-average equivalent shares outstanding in 2017 and 15.6 million in 2016. The decrease in shares year-over-year is due to the Company's stock repurchase program. The Company purchased approximately 1.2 million shares of its stock for treasury during 2017.

2016 as compared with 2015

The Company recorded revenue in 2016 and 2015 as follows:

Year Ended December 31, (dollars in thousands)	% of total	2016	% of total	2015	Year-Over-Year Change
North America	78.3 %	$254,264	81.8 %	$302,171	(15.9)%
Europe	21.7 %	70,629	18.2 %	67,307	4.9 %
Total	100.0%	$324,893	100.0%	$369,478	(12.1)%

Reimbursable expenses billed to clients and included in revenue totaled $4.0 million and $6.5 million in 2016 and 2015, respectively. The decrease in reimbursable expenses year-over-year is primarily due to a reduction in the number of consultants in our healthcare vertical market, as many of those employees travel to client locations to perform services.

The revenue decrease in North America in 2016 as compared with 2015 was primarily due to a significant decrease in demand for the Company's IT solutions business, primarily in our healthcare vertical market, and a decrease in demand for our IT and other staffing services business from several large clients. The revenue increase in Europe is primarily due to strong demand for the Company's services in the European markets we serve.

On a consolidated basis, IT solutions revenue decreased $27.3 million or 22.4% in 2016 as compared with 2015. The Company's healthcare vertical market grew from 2008 to 2012 primarily from installing electronic health records (EHR) systems in hospitals and health systems. As of December 31, 2016, EHR installations are largely complete within the U.S. healthcare market. Beginning in late 2014, the Company began to see significant reductions in billable resources at a number of its larger healthcare clients which further decreased IT solutions revenue in the Company's healthcare vertical market as existing projects came to an end. This decrease in spending on healthcare IT projects continued throughout 2016 for the clients that we serve. As part of our strategy to shift to non-EHR services, the Company expanded its healthcare IT business development team in 2016 with individuals who have experience selling healthcare IT services such as advisory and technical services, outsourcing, and staff augmentation. However, in 2016 this team as a whole was not successful in reducing our revenue losses in this vertical market, and expanding the non-EHR healthcare related services we provide.

Also on a consolidated basis, IT and other staffing revenue decreased $17.3 million or 7.0% during 2016 as compared with 2015. The IT staffing decrease was primarily due to a decrease in demand from a number of the Company's largest staffing clients. Additionally, during the 2016 third quarter, the Company was informed by its largest client that there would be significant reductions in both requirements and billable rates for certain of the employees provided to this client beginning in the 2016 fourth quarter. Originally, these employee reductions could have totaled as much as 40% of the total revenue earned from this client. However, CTG was able to negotiate the retention of a number of these requirements, although many of the retained employees were subject to reductions in billable rates. The Company reduced its cost structure supporting its staffing clients in the 2016 fourth quarter to partially offset this loss in revenue and reductions in billable rates.

The Company's headcount was approximately 3,450 employees at December 31, 2016, which was a 6% decrease from approximately 3,600 employees at December 31, 2015. Approximately 90% of this headcount is for technical resources, and 10% for support positions.

The increase in revenue in the Company's European operations in 2016 as compared with the corresponding 2015 period was due to an increase in demand for the Company's IT solutions services across a number of the vertical markets we serve, partially offset by weakness relative to the U.S. dollar of the currencies of Belgium, Luxembourg, and the United Kingdom, the countries in which the Company's European subsidiaries operate. In Belgium and Luxembourg, the functional currency is the Euro, while in the United Kingdom the functional currency is the British Pound. In 2016 as compared with 2015, the average value of the Euro decreased 0.3%, and the average value of the British Pound decreased 11.3%. A significant portion of the Company's revenue from its European operations is generated in Belgium and Luxembourg. Had there been no change in these exchange rates from 2015 to 2016, total European revenue would have been approximately $0.6 million higher, or $71.2 million as compared with the $70.6 million reported. When considering the year-over-year change in revenue in constant currencies, revenue from our European operations increased 5.9%. Operating income was essentially unchanged in 2016 as compared with 2015 given the change in the exchange rates year-over-year.

International Business Machines Corporation (IBM) was CTG's largest client and accounted for $98.4 million or 30.3% and $99.2 million or 26.9% of the Company's consolidated revenue in 2016 and 2015, respectively. During the 2017 third quarter, the NTS Agreement with IBM was extended for two years and now expires on December 31,

2019. As part of the NTS Agreement, the Company also provides its services as a predominant supplier to IBM’s Integrated Technology Services and the Systems and Technology Group business units. This agreement accounted for approximately 89% of all of the services provided to IBM by the Company in 2016. As previously mentioned, although there could have been a significant reduction in the number of requirements from this client beginning in the 2016 fourth quarter, the headcount losses were partially mitigated as of the 2016 year-end, and the expected annual loss in revenue is approximately $15-20 million in 2017. The Company’s accounts receivable from IBM at December 31, 2016 and 2015 totaled $28.0 million and $26.4 million, respectively.

SDI was the Company's second largest client and accounted for $34.5 million or 10.6% and $44.0 million or 11.9% of the Company’s consolidated revenue in 2016 and 2015, respectively. SDI acts as a vendor manager for Lenovo, and all of the Company's revenue generated through SDI relates to CTG employees working at Lenovo. The Company's accounts receivable from SDI at December 31, 2016 and December 31, 2015 totaled $5.6 million and $5.5 million, respectively.

We continued to derive a significant portion of our revenue from IBM and SDI in 2017, although demand from IBM was significantly reduced in 2017 as compared with 2016. A significant decline or the loss of the revenue from these clients would have a significant negative effect on our operating results. No other client accounted for more than 10% of the Company’s revenue in 2016 or 2015.

Direct costs, defined as costs for billable staff including billable out-of-pocket expenses, were 81.8% of consolidated revenue in both 2016 and 2015. In the 2016 second quarter, the Company’s European operations recorded a payroll tax credit totaling approximately $0.7 million which reduced direct costs in 2016. The credited amounts returned certain costs incurred from 2011 to 2014, and the Company does not anticipate a significant credit in the future. In the 2015 second quarter, the Company recorded several charges totaling $2.1 million which increased direct costs. When considering these items, direct costs as a percentage of revenue in 2016 increased as compared with 2015. This increase was due to the significant shift in the mix of the Company's business to a much higher level of IT staffing revenue. These services are provided to the Company's largest IT staffing clients, which have much higher direct costs as a percentage of revenue as compared with the Company's IT solutions clients.

Selling, general and administrative (SG&A) expenses were 17.0% of revenue in 2016 as compared with 15.3% of revenue in 2015. The increase in SG&A expenses as a percentage of revenue in 2016 as compared with 2015 is primarily due to costs incurred by our operating units as the Company continues to make investments in sales, recruiting and delivery resources in order to focus on the Company’s long-term growth, and the loss of operating leverage from a decrease in revenue. Additionally, severance incurred for the resignation of two former executives totaled $1.5 million and was included in the 2016 results.

During the 2016 first quarter, the Company determined that a goodwill impairment indicator existed which required an interim impairment analysis. As a result of the analysis, the Company determined the implied fair value of its goodwill balance was below the carrying value. Accordingly, the Company recorded a non-tax deductible goodwill impairment charge of $21.5 million to reduce the value of its goodwill balance to the implied fair value. Additionally, during the 2016 third quarter, the Company determined that another goodwill impairment indicator existed which required a second interim impairment analysis. As a result of the analysis, the Company determined the implied fair value of its goodwill balance was again below the carrying value. Accordingly, the Company recorded a non-tax deductible goodwill impairment charge of $15.8 million to reduce the value of its goodwill balance to the implied fair value, which reduced the Company’s goodwill balance to $0.0.

The significant decrease in operating income in 2016 was due to the goodwill impairment charges taken in the 2016 first and third quarters totaling $37.3 million. Operating income (loss) was (10.3)% of revenue in 2016 as compared with 2.9% of revenue in 2015. Operating income (loss) from North American operations was reduced by goodwill impairment charges of $35.6 million, and totaled $(35.7) million in 2016 compared with $9.0 million in 2015. Operating income from our European operations was $2.4 million in 2016 compared with $1.7 million in 2015. The 2016 results in Europe were reduced by a goodwill impairment charge of approximately $1.7 million, offset by a payroll tax credit of $0.7 million recorded in the 2016 second quarter.

Other income (expense) was (0.1)% of revenue in 2016 and 0.0% of revenue in 2015. In 2015, the Company recorded a non-taxable life insurance gain of approximately $0.2 million as one of its former executives passed away in the 2015 fourth quarter. The Company received proceeds from the policy totaling approximately $0.4 million in the 2016 first quarter.

The Company’s effective tax rate (ETR) is calculated based upon the full year's operating results and various tax related items. The Company’s normal ETR ranges from 38% to 40%. The ETR in 2016 was (3.3)%, while the 2015 ETR was 39.3%.

The ETR was lower than the normal range in 2016 primarily due to the non-deductible goodwill impairment charges totaling $37.3 million in the 2016 first and third quarters, and also due to the extension of the Work Opportunity Tax Credit (WOTC) and the Research and Development tax credit (R&D) which were renewed by the U.S. federal government in the 2015 fourth quarter and were effective for all of 2016. These credits totaled approximately $0.6 million.

Net loss for 2016 was (10.7)% of revenue or $(2.22) per diluted share, compared with net income of 1.8% of revenue or $0.41 per diluted share in 2015. Diluted earnings per share were calculated using 15.6 million weighted-average equivalent shares outstanding in 2016 and 15.9 million in 2015. The decrease in shares year-over-year is due to there being no dilutive effect of outstanding equity-based compensation grants in 2016 due to the net loss.

Critical Accounting Policies

The preparation of financial statements and related disclosures in conformity with U.S. generally accepted accounting principles requires the Company’s management to make estimates, judgments and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. The Company’s significant accounting policies are included in note 1 to the consolidated financial statements contained in this annual report on Form 10-K under Item 8, “Financial Statements and Supplementary Data.” These policies, along with the underlying assumptions and judgments made by the Company’s management in their application, have a significant impact on the Company’s consolidated financial statements. The Company identifies its most critical accounting policies as those that are the most pervasive and important to the portrayal of the Company’s financial position and results of operations, and that require the most difficult, subjective and/or complex judgments by management regarding estimates about matters that are inherently uncertain. The Company’s critical accounting policies are those related to goodwill valuation, and the valuation allowance for deferred income taxes.

Income Taxes—Valuation Allowances on Deferred Tax Assets

At December 31, 2017, the Company had a total of approximately $3.8 million of deferred tax assets, net of deferred tax liabilities, recorded on its consolidated balance sheet. The deferred tax assets, net, primarily consist of deferred compensation, loss carryforwards and state taxes. The changes in deferred tax assets and liabilities from period to period are determined based upon the changes in differences between the basis of assets and liabilities for financial reporting purposes and the basis of assets and liabilities for tax purposes, as measured by the enacted tax rates when these differences are estimated to reverse. The Company has made certain assumptions regarding the timing of the reversal of these assets and liabilities, and whether taxable income in future periods will be sufficient to recognize all or a part of any gross deferred tax asset of the Company.

At December 31, 2017, the Company had deferred tax assets recorded resulting from net operating losses in previous years totaling approximately $1.1 million. The Company has analyzed each jurisdiction’s tax position, including forecasting potential taxable income in future periods and the expiration of the net operating loss carryforwards as applicable, and determined that it is unclear whether all of these deferred tax assets will be realized at any point in the future. Accordingly, at December 31, 2017, the Company had offset a portion of these assets with a valuation allowance totaling approximately $1.0 million, resulting in a net deferred tax asset from net operating loss carryforwards of approximately $0.1 million.

The Company’s deferred tax assets and their potential realizability are evaluated each quarter to determine if any changes should be made to the valuation allowance. Any change in the valuation allowance in the future could result in a change in the Company’s ETR. A 1% change in the ETR in 2017 would have increased or decreased net income by approximately $40,600, or less than $0.01 per diluted share.

Other Estimates

The Company has also made a number of estimates and assumptions relating to the reporting of its assets and liabilities and the disclosure of contingent assets and liabilities to prepare the consolidated financial statements pursuant to the rules and regulations of the SEC, the FASB, and other regulatory authorities. Such estimates primarily relate to the valuation of stock options for recording equity-based compensation expense, allowances for doubtful accounts receivable, investment valuation, discount rates associated with pension plans, incurred but not reported healthcare claims, legal matters, and estimates of progress toward completion and direct profit or loss on contracts, as applicable. As future events and their effect on the Company's operating results cannot be determined with precision, actual results could differ from these estimates. Changes in the economic climates in which the Company operates may affect these estimates and will be reflected in the Company’s financial statements in the event they occur.

Financial Condition and Liquidity

Cash provided by (used in) operating activities was $9.2 million, $2.4 million, and $(3.5) million in 2017, 2016, and 2015, respectively. In 2017, net income was $0.8 million, while other non-cash adjustments, primarily consisting of depreciation expense, equity-based compensation, deferred income taxes, deferred compensation, and non-taxable life insurance gain totaled $4.5 million. In 2016 and 2015, net income (loss) was $(34.6) million and $6.5 million, respectively, while the corresponding non-cash adjustments netted to $40.3 million and $4.6 million, respectively.

Accounts receivable balances decreased $5.2 million in 2017 as compared with 2016, increased $0.7 million in 2016 as compared with 2015, and increased $6.0 million in 2015 as compared with 2014. The decrease in the accounts receivable balance in 2017 resulted from a decrease in revenue of 7.3% in the 2017 period as compared with the prior period. The decrease in revenue is partially offset by a slight increase in days sales outstanding (DSO). DSO is calculated by dividing accounts receivable obtained from the consolidated balance sheet by average daily revenue for the fourth quarter of the respective year. DSO was 86 days at December 31, 2017 as compared with DSO at December 31, 2016 of 85 days. DSO was 85 days at December 31, 2016 as compared with DSO at December 31, 2015 of 76 days. The increase in DSO in 2016 as compared with 2015 was due to the timing of payments received from our largest client in relation to 2016 quarter-end, and a general lengthening of payment terms from the largest clients in our IT staffing and other business. The increase in DSO was offset by a reduction in year-over-year revenue in the 2016 fourth quarter of 8.0%. The increase in the accounts receivable balance in 2015 as compared with 2014 resulted from an increase in DSO to 76 days at December 31, 2015 from 66 days at December 31, 2014 as the Company removed itself from an advance pay program with its largest client in 2015 where invoices that had previously been paid in 15 days for a fee were now paid in 70 days. The increase in DSO was partially offset by a decrease in revenue in the 2015 fourth quarter of approximately 14.3% when compared with the 2014 fourth quarter.

The cash surrender value of life insurance policies increased $0.8 million in 2017, increased $0.6 million in 2016, and increased $0.7 million in 2015. The increase in each of the years were due to normal appreciation of the existing cash surrender value that the Company has recorded which totaled approximately $31.5 million at December 31, 2017. Accounts payable increased $1.7 million in 2017, decreased $0.8 million in 2016, and decreased $0.6 million in 2015. The increase in accounts payable in 2017 was primarily due to the timing of certain payments near year-end. The decrease in 2016 and 2015 was primarily due to lower payables as the Company's business contracted, and the timing of certain payments near year-end. Accrued compensation decreased $1.3 million in 2017 primarily due to a reduction in employee headcount. Accrued Compensation was essentially unchanged in 2016 as compared with 2015 as the U.S. bi-weekly payroll was paid on the last business day of the year consistent with 2015 and decreased $9.1 million in 2015 primarily due to the timing of the U.S. bi-weekly payroll which was paid on the last business day of the year in 2015 and lower headcount. Income taxes receivable increased by $0.6 million in 2017 due to the timing of payments made in 2017. Income taxes receivable were essentially unchanged in 2016 due to the timing and amount of payments made in 2016, decreased $1.9 million in 2015 due to the timing of payments made in 2015.

Investing activities used $3.2 million, $2.6 million, and $2.0 million of cash in 2017, 2016, and 2015, respectively, primarily due to additions to property, equipment and capitalized software of $2.5 million in 2017, $2.2 million in 2016, and $1.9 million in 2015. The Company expects the amount to be spent in 2018 on additions to property, equipment and capitalized software to decrease from the amount spent in 2017. The Company has no material commitments for future capital expenditures.

As of December 31, 2017, the Company was in the process of negotiating the sale of its corporate administrative building. The list price for the property was $2.6 million and the carrying value was approximately $1.6 million. In February 2018, the Company sold this building for $1.8 million.

Financing activities used $5.5 million, $0.9 million, and $23.5 million of cash in 2017, 2016, and 2015, respectively. The Company recorded $0.7 million, $0.3 million, and $3.0 million during 2017, 2016, and 2015, respectively, from the proceeds from stock option exercises and excess tax benefits from equity-based compensation transactions. These amounts were lower in 2017 and 2016 as compared with 2015 primarily due to a lower average stock price in 2017 and 2016 which led to fewer stock option exercises, and lower tax benefits from equity-based compensation activity.

The Company paid dividends totaling $2.9 million in 2016 and $3.6 million in 2015. Dividends paid in 2016 were lower than previous years as the Company suspended the payment of its dividend in the 2016 fourth quarter. The Company did not declare or pay dividends in 2017.

During the 2016 fourth quarter, the Company’s Board of Directors authorized the repurchase of up to $10.0 million of its stock over the next two years. This share repurchase authorization replaced the Company’s previous buyback program. During the 2017 fourth quarter, the Company’s Board of Directors approved a $10.0 million addition to the stock repurchase program to bring the authorization to $20.0 million in total. During 2017, 2016, and 2015, the

Company used $6.2 million, $1.2 million, and $1.4 million, respectively, to purchase approximately 1.2 million, 0.3 million, and 0.2 million shares of its stock for treasury. Approximately $12.7 million, $8.8 million, and $0.5 million, respectively, remained authorized for future purchases under the Company's share repurchase plans at December 31, 2017, 2016 and 2015, respectively. At December 31, 2017, 2016 and 2015, the Company also experienced changes in its cash account overdrafts, which are primarily due to the timing of payments near year-end, of $0.4 million, $(0.4) million, and $0.4 million, respectively.

During 2015, the Company paid off loans it had previously taken against its owned life insurance policies totaling $22.8 million. The Company chose to pay off these loans as it could obtain bank financing at a lower rate of interest. No such payments were made in 2017 or 2016.

In December 2017, the Company entered into a new credit and security agreement with its bank, which provides for a three-year revolving credit facility in an aggregate principal amount of $45.0 million, including a sublimit of $10.0 million for letters of credit and a $10.0 million sublimit for swing line loans. In connection with execution of the credit and security agreement, the Company concurrently repaid in full and terminated the credit agreement dated October 30, 2015.

The new agreement expires in December 2020, and has interest rates ranging from 150 to 200 basis points over LIBOR or the greater of (i) the prime rate, (ii) the federal fund effective rate plus 50 basis points, and (iii) adjusted LIBOR plus 100 basis points plus a spread ranging from 50 to 100 basis points based on the amounts outstanding under the Credit and Security Agreement. The Company can borrow under the agreement with either rate at its discretion.

There was $4.4 million, $4.7 million, and $1.2 outstanding under the Company's lines of credit at December 31, 2017, 2016, and 2015, respectively. The Company borrows or repays its debt as needed based upon its working capital obligations, including the timing of the U.S. bi-weekly payroll.

The maximum amount outstanding under its credit agreements in 2017, 2016, and 2015 was $6.0 million, $4.7 million, and $10.0 million, respectively. The average amounts outstanding during 2017, 2016, and 2015 were $2.2 million, $1.9 million, and $8.1 million, respectively, and carried weighted-average interest rates of 3.0%, 2.9%, and 1.8%, respectively. Total commitment fees incurred in 2017, 2016, and 2015 totaled approximately $0.1 million in each year, while interest paid in 2017, 2016, and 2015 also totaled less than $0.1 million in each year.

Under the new agreement, the Company is required to meet certain financial covenants in order to maintain borrowings under its revolving credit line, pay dividends, and make acquisitions. The covenants are measured quarterly, and at December 31, 2017, included a fixed charge coverage ratio, which must be less than 1.10 to 1.00, consolidated earnings before interest, taxes, depreciation, and amortization (EBITDA) must be no less than $5.0 million for the trailing twelve months, and capital expenditures for property, plant, equipment, and capitalized software must be no more than $5.0 million in any annual period. The fixed charge coverage ratio is only tested if availability on a measurement date is less than $5.625 million. Actual borrowings by CTG under the Credit Agreement are subject to a borrowing base, which is a formula based on certain eligible receivables and reserves. Total availability as of December 31, 2017 was approximately $28.9 million. The Company was in compliance with these covenants at December 31, 2017 as EBITDA was $6.8 million and capital expenditures for property, equipment and capitalized software were $2.5 million in 2017. The Company was also in compliance with its covenants at December 31, 2016 and December 31, 2015.

Of the total cash and cash equivalents reported on the consolidated balance sheet at December 31, 2017 of $11.2 million, approximately $10.5 million is held by the Company's foreign operations and is considered to be indefinitely reinvested in those operations. The Company has not repatriated any of its cash and cash equivalents from its foreign operations in the past five years, and has no intention of doing so in the foreseeable future as the funds are generally required to meet the working capital needs of its foreign operations.

At December 31, 2017, the Company believes existing internally available funds, cash potentially generated from future operations, funds available under the Company's revolving line of credit (subject to collateral limits) totaling $40.3 million, and funds available to be borrowed against the cash surrender value of our life insurance policies of approximately $28.9 million, will be sufficient to meet foreseeable working capital and capital expenditure needs, fund stock repurchases, pay a dividend (if any), fund acquisitions, and allow for future internal growth and expansion.

Off-Balance Sheet Arrangements

The Company did not have off-balance sheet arrangements or transactions in 2017, 2016 or 2015 other than guarantees in our European operations which support office leases and performance under government contracts.

These guarantees totaled approximately $1.1 million at December 31, 2017.

Quantitative and Qualitative Disclosures about Market Risk

The Company's primary market risk exposure consists of foreign currency exchange risk associated with the Company's European operations. See Item 7A, "Quantitative and Qualitative Disclosure about Market Risk" in this report.

Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," ("ASU 2014-09"). ASU 2014-09 outlines a new, single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. This new revenue recognition model provides a five-step analysis in determining when and how revenue is recognized. The new model will require revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration a company expects to receive in exchange for those goods or services. The pronouncement is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is only permitted in years beginning after December 31, 2016. The Company will apply the new standard using the cumulative effect method and will apply the requirements of the new standard to only projects that are open as of January 1, 2018.

The Company currently records approximately 97% of its annual revenue on a time-and-materials and progress billing basis, with the remaining 3% recorded under a proportional method of accounting using an inputs based methodology for fixed price projects. For the 97% of the Company's revenue recorded under the time-and-material method of accounting, excluding the principal and agent considerations described below, the new standard will not change the timing or the amount of revenue that is recorded. The Company has also evaluated the revenue recorded under its fixed price projects to determine if the manner or timing of revenue recognition would change for existing projects. The impact of adopting this new accounting guidance will have an immaterial impact on the timing and amount of revenue recorded under its fixed price projects.

When more than one party is involved in providing goods or services to a customer, the standard requires an entity to determine whether it is a principal or an agent in these transactions by evaluating the nature of its promise to the customer. The fundamental premise of the principal and agent determination is the concept of control. The Company had recorded approximately 3% of its consolidated revenue on a net basis during 2017 under current accounting rules. Under the new standard, the Company will report gross revenue and expense for a significant portion of this revenue beginning January 1, 2018.

In November 2015, the FASB issued ASU 2015-17, "Balance Sheet Classifications of Deferred Taxes," which amended accounting guidance related to the presentation of deferred tax liabilities and assets. The amended guidance requires that all deferred tax liabilities and assets be classified as noncurrent on the balance sheet. This guidance was effective for reporting periods beginning after December 15, 2016. Upon adoption of this guidance in the 2017 first quarter, the Company reclassified approximately $0.9 million as of both March 31, 2017 and December 31, 2016 from current to non-current assets.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)," which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e. lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. Topic 842 supersedes the previous leases standard, ASC 840, Leases. This guidance is effective for reporting periods beginning after December 15, 2018; however, early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting," which amended accounting guidance related to seven aspects of the accounting for share-based payments award transactions. This guidance was effective for reporting periods beginning after December 15, 2016. During 2017, the Company recorded approximately $0.3 million of additional tax expense for tax shortfalls that would previously have been recorded to capital in excess of par value. We have adopted this guidance prospectively and prior periods have not been adjusted.

Additionally, the Company recorded $0.3 million, $0.4 million, and $0.6 million in 2017, 2016, and 2015, respectively, for taxes remitted for shares withheld from equity-based compensation transactions on the consolidated statements of cash flows in the “cash flow from financing activities” section.

Contractual Obligations

The Company intends to satisfy its contractual obligations from operating cash flows, and, if necessary, from draws on its demand credit line. A summary of the Company's contractual obligations at December 31, 2017 is as follows:

		Payments Due by Period				
(in millions)		Total	Less than 1 year	Years 2-3	Years 4-5	More than 5 years
Long-term debt	A	$4.4	$—	$4.4	$ —	$ —
Operating lease obligations	B	11.3	4.6	4.5	1.8	0.4
Purchase obligations	C	3.2	2.3	0.9	—	—
Deferred compensation benefits (U.S.)	D	5.5	0.7	1.3	1.2	2.3
Deferred compensation benefits (Netherlands)	E	3.2	0.2	0.5	0.6	1.9
Deferred compensation benefits (Belgium)	F	1.6	—	—	0.4	1.2
Other long-term liabilities	G	0.2	0.1	0.1	—	—
Total		$29.4	$7.9	$11.7	$ 4.0	$ 5.8

A On December 21, 2017, the Company entered into a credit and security agreement (LOC) which provides for a three-year revolving credit facility in an aggregate principal amount of $45.0 million, including a sublimit of $10.0 million for letters of credit and a $10.0 million sublimit for swing line loans. The Company uses this LOC to fund its working capital obligations as needed, primarily funding the U.S. bi-weekly payroll. A total of $4.4 million in borrowings was outstanding under the Agreement as of December 31, 2017.

B Operating lease obligations relate to the rental of office space, office equipment, and automobiles leased in the Company's European operations. Total rental expense under operating leases in 2017, 2016 and 2015 was approximately $5.9 million, $5.7 million, and $6.1 million, respectively.

C The Company's purchase obligations in 2017, 2018 and 2019 total approximately $3.2 million, including $1.5 million for software maintenance, support and related fees, $0.3 million for telecommunications, $0.8 million for recruiting services, $0.4 million for professional organization memberships, and $0.2 million for computer-based training courses.

D The Company is committed for deferred compensation benefits in the U.S. under two plans. The Executive Supplemental Benefit Plan (ESBP) provides certain former key executives with deferred compensation benefits. The ESBP was amended as of November 30, 1994 to freeze benefits for participants at that time. At December 31, 2017, 15 individuals are receiving benefits under this plan. The ESBP is deemed to be unfunded as the Company has not specifically identified Company assets to be used to discharge the deferred compensation benefit liabilities.

E The Company retained a contributory defined-benefit plan for its previous employees located in the Netherlands when the Company disposed of its subsidiary, CTG Nederland B.V. This plan was curtailed on January 1, 2003 for additional contributions. The Company does not anticipate making additional contributions to fund the plan in future years.

F The Company maintains a fully funded pension plan for its Belgium employees. The Company will continue to make additional contributions to fund the plan in future years.

G The Company has other long-term liabilities including payments for a postretirement benefit plan for several retired employees and their spouses, totaling fewer than 10 participants.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The Company's primary market risk exposure consists of foreign currency exchange risk associated with the Company's European operations.

During 2017, revenue was affected by the year-over-year foreign currency exchange rate changes of Belgium, Luxembourg, and the United Kingdom, the countries in which the Company's European subsidiaries operate. In Belgium and Luxembourg, the functional currency is the Euro, while in the United Kingdom the functional currency is the British Pound. Had there been no change in these exchange rates from 2016 to 2017, total European revenue would have been approximately $1.4 million lower in 2017, or $79.7 million as compared with the $81.1 million reported. Operating income in the Company's European operations would not have been significantly impacted by the change in foreign currency exchange rates year-over-year.

The Company has historically not used any market rate sensitive instruments to hedge its foreign currency exchange risk as it conducts its foreign operations in local currencies, which generally limits risk. The Company believes the market risk related to intercompany balances in future periods will not have a material effect on its results of operations.

Item 8. Financial Statements and Supplementary Data
Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Computer Task Group, Incorporated:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Computer Task Group, Incorporated and subsidiaries (the "Company") as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), cash flows, and shareholders' equity for each of the years in the three year period ended December 31, 2017, and the related notes and financial statement schedule (collectively, the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 14, 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 2003.

Buffalo, New York

March 14, 2018

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Consolidated Statements of Operations

Year Ended December 31, (amounts in thousands, except per-share data)	2017	2016	2015
Revenue	$301,210	$324,893	$369,478
Direct costs	245,127	265,711	302,318
Selling, general and administrative expenses	52,139	55,200	56,523
Goodwill impairment charges	—	37,329	—
Operating income (loss)	3,944	(33,347)	10,637
Interest and other income	88	188	79
Non-taxable life insurance gain	390	—	246
Interest and other expense	365	377	233
Income (loss) before income taxes	4,057	(33,536)	10,729
Provision for income taxes	3,251	1,102	4,219
Net income (loss)	$806	$(34,638)	$6,510
Net income (loss) per share:			
Basic	$0.05	$(2.22)	$0.42
Diluted	$0.05	$(2.22)	$0.41
Weighted average shares outstanding:			
Basic	15,055	15,593	15,479
Diluted	15,324	15,593	15,920
Cash dividend per common share	$—	$0.18	$0.24

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

Consolidated Statements of Comprehensive Income (Loss)

Year Ended December 31, (amounts in thousands)	2017	2016	2015
Net Income (loss)	$806	$(34,638)	$6,510
Foreign currency adjustment	2,481	(758)	(1,875)
Change in pension loss, net of taxes of $308, $71, and $327, in 2017, 2016 and 2015, respectively	606	(1,365)	2,828
Other comprehensive income (loss)	3,087	(2,123)	953
Comprehensive income (loss)	$3,893	$(36,761)	$7,463

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

Consolidated Balance Sheets

December 31, (amounts in thousands, except share balances)	2017	2016
Assets		
Current Assets:		
Cash and cash equivalents	$11,170	$9,407
Accounts receivable, net of allowances of $133 and $469 in 2017 and 2016, respectively	68,920	71,355
Prepaid and other current assets	2,370	2,010
Income taxes receivable	1,068	—
Total current assets	83,528	82,772
Property, equipment and capitalized software, net	6,996	5,863
Deferred income taxes	3,861	6,886
Cash surrender value of life insurance	31,547	30,143
Other assets	1,302	881
Investments	401	370
Total assets	$127,635	$126,915
Liabilities and Shareholders' Equity		
Current Liabilities:		
Accounts payable	$9,425	$6,973
Accrued compensation	17,065	17,365
Advance billings on contracts	1,918	935
Other current liabilities	4,328	4,610
Income taxes payable	—	28
Total current liabilities	32,736	29,911
Long-term debt	4,435	4,725
Deferred compensation benefits	11,647	12,993
Other long-term liabilities	193	467
Total liabilities	49,011	48,096
Shareholders' Equity:		
Common stock, par value $0.01 per share, 150,000,000 shares authorized; 27,017,824 shares issued in both periods	270	270
Capital in excess of par value	120,247	123,947
Retained earnings	85,029	84,223
Less: Treasury stock of 11,754,147 and 11,077,779 shares at cost, in 2017 and 2016, respectively	(113,246)	(112,858)
Accumulated other comprehensive loss	(13,676)	(16,763)
Total shareholders' equity	78,624	78,819
Total liabilities and shareholders' equity	$127,635	$126,915

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

Consolidated Statements of Cash Flows

Year Ended December 31, (amounts in thousands)	2017	2016	2015
Cash flow from operating activities:			
Net income (loss)	$806	$(34,638)	$6,510
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization expense	1,578	1,647	1,962
Equity-based compensation expense	1,059	1,626	1,317
Deferred income taxes	2,437	(583)	425
Deferred compensation	(162)	270	(10)
Goodwill impairment	—	37,329	—
Write-off of capitalized software	—	—	1,186
Non-taxable life insurance gain	(390)	—	(246)
Changes in assets and liabilities:			
(Increase) decrease in accounts receivable	5,202	(729)	(5,951)
(Increase) decrease in prepaid and other current assets	85	(520)	269
(Increase) decrease in other long-term assets	(421)	(242)	529
(Increase) in cash surrender value of life insurance	(772)	(567)	(713)
Increase (decrease) in accounts payable	1,651	(763)	(603)
Increase (decrease) in accrued compensation	(1,336)	132	(9,104)
Increase (decrease) in income taxes payable / receivable	(592)	(242)	1,894
Increase (decrease) in advance billings on contracts	808	29	(421)
Decrease in other current liabilities	(447)	(354)	(650)
Increase (decrease) in other long-term liabilities	(276)	40	137
Net cash provided by (used) in operating activities	9,230	2,435	(3,469)
Cash flow from investing activities:			
Additions to property and equipment	(1,557)	(1,665)	(1,260)
Additions to capitalized software	(952)	(522)	(641)
Premiums paid for life insurance	(632)	(690)	(653)
Life insurance proceeds	—	394	—
Deferred compensation plan investments, net	(45)	(110)	534
Net cash used in investing activities	(3,186)	(2,593)	(2,020)
Cash flow from financing activities:			
Proceeds from long-term debt	60,620	47,065	19,585
Payments on long-term debt	(60,910)	(43,565)	(18,360)
Proceeds from stock option plan exercises	735	262	2,598
Excess tax benefits from equity-based compensation	—	22	380
Taxes remitted for shares withheld from equity-based compensation transactions	(328)	(380)	(563)
Proceeds from Employee Stock Purchase Plan	155	215	276
Change in cash overdraft, net	397	(362)	411
Dividends paid	—	(2,890)	(3,624)
Payments against loans on life insurance policies	—	—	(22,827)
Purchase of stock for treasury	(6,159)	(1,244)	(1,406)
Net cash used in financing activities	(5,490)	(877)	(23,530)
Effect of exchange rates on cash and cash equivalents	1,209	(359)	(1,042)
Net increase (decrease) in cash and cash equivalents	1,763	(1,394)	(30,061)
Cash and cash equivalents at beginning of year	9,407	10,801	40,862

Cash and cash equivalents at end of year	$11,170	$9,407	$10,801

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

Consolidated Statements of Shareholders' Equity

(amounts in thousands)	Common Stock Shares	Common Stock Amount	Capital in Excess of Par Value	Retained Earnings	Treasury Stock Shares	Treasury Stock Amount	Stock Trusts Shares	Stock Trusts Amount	Accumulated Other Comprehensive Income (loss)	Total Shareholders' Equity
Balances as of December 31, 2014	27,018	270	125,884	118,999	8,486	(63,511)	3,363	(55,083)	(15,593)	110,966
Employee Stock Purchase Plan share issuance	—	—	(5)	—	(37)	281	—	—	—	276
Stock Option Plan share issuance, net	—	—	(1,736)	—	(551)	4,141	—	—	—	2,405
Excess tax benefits from equity-based compensation	—	—	380	—	—	—	—	—	—	380
Restricted stock plan share issuance/forfeiture	—	—	(632)	—	10	(352)	(98)	421	—	(563)
Deferred compensation plan share issuance	—	—	18	—	(76)	572	—	—	—	590
Purchase of stock	—	—	—	—	182	(1,406)	—	—	—	(1,406)
Equity-based compensation	—	—	1,317	—	—	—	—	—	—	1,317
Net income	—	—	—	6,510	—	—	—	—	—	6,510
Dividends declared	—	—	—	(3,711)	—	—	—	—	—	(3,711)
Foreign currency adjustment	—	—	—	—	—	—	—	—	(1,875)	(1,875)
Pension loss adjustment, net of tax	—	—	—	—	—	—	—	—	2,828	2,828
Balances as of December 31, 2015	27,018	270	125,226	121,798	8,014	(60,275)	3,265	(54,662)	(14,640)	117,717
Employee Stock Purchase Plan	—	—	(211)	—	(44)	426	—	—	—	215

share issuance										
Stock Option Plan share issuance, net	—	—	(820)	—	(95)	1,082	—	—	—	262
Excess tax benefits from equity-based compensation	—	—	(233)	—	—	—	—	—	—	(233)
Restricted stock plan share issuance/forfeiture	—	—	(1,241)	—	259	(1,286)	(503)	2,145	—	(382)
Deferred compensation plan share issuance	—	—	(400)	—	(105)	949	—	—	—	549
Purchase of stock	—	—	—	—	287	(1,244)	—	—	—	(1,244)
Termination of stock trusts	—	—	—	—	2,762	(52,510)	(2,762)	52,517	—	7
Equity-based compensation	—	—	1,626	—	—	—	—	—	—	1,626
Net loss	—	—	—	(34,638)	—	—	—	—	—	(34,638)
Dividends declared	—	—	—	(2,937)	—	—	—	—	—	(2,937)
Foreign currency adjustment	—	—	—	—	—	—	—	—	(758)	(758)
Pension loss adjustment, net of tax	—	—	—	—	—	—	—	—	(1,365)	(1,365)
Balances as of December 31, 2016	27,018	270	123,947	84,223	11,078	(112,858)	—	—	(16,763)	78,819

(continued on next page)

(amounts in thousands)	Common Stock Shares	Common Stock Amount	Capital in Excess of Par Value	Retained Earnings	Treasury Stock Shares	Treasury Stock Amount	Stock Trusts Shares	Stock Trusts Amount	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balances as of December 31, 2016	27,018	270	123,947	84,223	11,078	(112,858)	—	—	(16,763)	78,819
Employee Stock Purchase Plan share issuance	—	—	(133)	—	(29)	288	—	—		155
Stock Option Plan share issuance, net	—	—	(1,346)	—	(195)	2,080	—	—	—	735
Restricted stock plan share issuance/forfeiture	—	—	(2,870)	—	(182)	2,543	—	—	—	(328)
Deferred compensation plan share issuance	—	—	(410)	—	(87)	860	—	—	—	450
Purchase of stock	—	—	—	—	1,169	(6,159)	—	—	—	(6,159)
Equity-based compensation	—	—	1,059	—	—	—	—	—	—	1,059
Net income	—	—	—	806	—	—	—	—	—	806
Foreign currency adjustment	—	—	—	—	—	—	—	—	2,481	2,481
Pension loss adjustment, net of tax	—	—	—	—	—	—	—	—	606	606
Balances as of December 31, 2017	27,018	$270	$120,247	$85,029	11,754	$(113,246)	—	$—	$(13,676)	$78,624

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

Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The consolidated financial statements include the accounts of Computer Task Group, Incorporated, and its subsidiaries (the Company or CTG), located primarily in North America, Western Europe, and India. There are no unconsolidated entities, or off-balance sheet arrangements other than certain guarantees supporting office leases and the performance under government contracts in the Company's European operations. All inter-company accounts have been eliminated. Management of the Company has made a number of estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities to prepare these consolidated financial statements in conformity with U.S. generally accepted accounting principles. Such estimates primarily relate to the valuation allowances for deferred tax assets, actuarial assumptions including discount rates and expected rates of return, as applicable, for the Company’s defined benefit plans, the allowance for doubtful accounts receivable, assumptions underlying stock option valuation, investment valuation, estimates of progress toward completion and direct profit or loss on contracts, legal matters, and other contingencies. The current economic environments in the United States, Canada, Western Europe, and India where the Company has operations have increased the degree of uncertainty inherent in these estimates and assumptions. Actual results could differ from those estimates.

The Company operates in one industry segment, providing IT services to its clients. These services include IT Solutions and IT and other Staffing. CTG provides these services to all of the markets that it serves. The services provided typically encompass the IT business solution life cycle, including phases for planning, developing, implementing, managing, and ultimately maintaining the IT solution. A typical client is an organization with large, complex information and data processing requirements. The Company provides administrative or warehouse employees to clients from time to time to supplement the IT resources we place at those clients. The Company promotes a significant portion of its services through five vertical market focus areas: technology service providers, manufacturing, healthcare (which includes services provided to healthcare providers, health insurers, and life sciences companies), financial services, and energy. The Company focuses on these five vertical areas as it believes that these areas are either higher growth markets than the general IT services market and the general economy, or are areas that provide greater potential for the Company’s growth due to the size of the vertical market. The remainder of CTG’s revenue is derived from general markets.

CTG’s revenue by vertical market as a percentage of consolidated revenue for the three years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
Technology service providers	33.1 %	35.2 %	31.1 %
Manufacturing	24.3 %	24.2 %	25.7 %
Healthcare	16.8 %	18.2 %	23.5 %
Financial services	9.1 %	7.8 %	7.2 %
Energy	5.0 %	5.3 %	5.4 %
General markets	11.7 %	9.3 %	7.1 %
Total	100.0 %	100.0 %	100.0 %

Revenue and Cost Recognition

The Company recognizes revenue when persuasive evidence of an arrangement exists, when the services have been rendered, when the price is determinable, and when collectibility of the amounts due is reasonably assured. For time-and-material contracts, revenue is recognized as hours are incurred and costs are expended. For contracts with periodic billing schedules, primarily monthly, revenue is recognized as services are rendered to the client. Revenue for fixed-price contracts is recognized per the proportional method of accounting using an input-based approach. On a given project, actual salary and indirect labor costs incurred are measured and compared against the total estimated costs of such items at the completion of the project. Revenue is recognized based upon the percentage-of-completion calculation of total incurred costs to total estimated costs. The Company infrequently works on fixed-price projects that include significant amounts of material or other non-labor related costs which could distort the percent complete within a percentage-of-completion calculation. The Company's estimate of the total labor costs it expects to incur over the term of the contract is based on the nature of the project and our past experience on similar projects, and includes management judgments and estimates which affect the amount of revenue recognized on fixed-price contracts in any accounting period. Loss on contracts, if any, are recorded at the time it is determined a loss exists on a project.

The Company’s revenue from contracts accounted for under time-and-material, progress billing, and percentage-of-completion methods as a percentage of consolidated revenue for the three years ended December 31, 2017, 2016, and 2015 is as follows:

	2017	2016	2015
Time-and-material	85.9 %	86.5 %	88.6 %
Progress billing	10.8 %	10.8 %	9.5 %
Percentage-of-completion	3.3 %	2.7 %	1.9 %
Total	100.0%	100.0%	100.0%

The Company includes billable expenses in its accounts as both revenue and direct costs. These billable expenses totaled $3.3 million, $4.0 million, and $6.5 million in 2017, 2016, and 2015, respectively.

Fair Value

Fair value is defined as the exchange price that would be received for an asset or paid for a liability in the principal or most advantageous market for the asset or liability, in an orderly transaction between market participants. The Company utilizes a fair value hierarchy for its assets and liabilities, as applicable, based upon three levels of input, which are:

Level 1—quoted prices in active markets for identical assets or liabilities (observable)

Level 2—inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in inactive markets, or other inputs that are observable or can be supported by observable market data for essentially the full term of the asset or liability (observable)

Level 3—unobservable inputs that are supported by little or no market activity, but are significant to determining the fair value of the asset or liability (unobservable)

At December 31, 2017 and 2016, the carrying amounts of the Company’s cash of $11.2 million and $9.4 million, respectively, approximated fair value.

The Company is also allowed to elect an irrevocable option to measure, on a contract by contract basis, specific financial instruments and certain other items that are currently not being measured at fair value. The Company did not elect to apply the fair value provisions of this standard for any specific contracts during the years ended December 31, 2017 and 2016.

Life Insurance Policies

The Company has purchased life insurance on the lives of a number of former employees who are plan participants in the non-qualified defined benefit Executive Supplemental Benefit Plan. In total, there are policies on approximately 20 individuals, whose average age is 74 years old. These policies have generated cash surrender value, and the Company, prior to 2015, had taken loans against the policies.

At December 31, 2017 and 2016, these insurance policies had a gross cash surrender value of $31.5 million and $30.1 million, respectively, and was included on the consolidated balance sheet as “Cash surrender value of life insurance.” There were no outstanding loans against these policies in 2017 and 2016.

At December 31, 2017 and 2016 the total death benefit for the remaining policies was approximately $42.2 million and $41.4 million, respectively. Currently, upon the death of all of the plan participants, the Company would expect to receive approximately $41.6 million, and under current tax regulations, would record a non-taxable gain of approximately $10.1 million.

Two former employees covered by this life insurance passed away, one in the 2017 fourth quarter and the other in the 2015 fourth quarter. The Company recorded non-taxable gains of approximately $0.4 million and $0.2 million in the respective quarters. The Company expects to receive $1.1 million in the 2018 first quarter for the 2017 death and received approximately $0.4 million in the 2016 first quarter for the 2015 death.

Taxes Collected from Clients

In instances where the Company collects taxes from its clients for remittance to governmental authorities, primarily in its European operations, revenue and expenses are not presented on a gross basis in the consolidated financial statements as such taxes are recorded in the Company's accounts on a net basis.

Cash and Cash Equivalents, and Cash Overdrafts

For purposes of the statement of cash flows, cash and cash equivalents are defined as cash on hand, demand deposits, and short-term, highly liquid investments with a maturity of three months or less. As the Company does not fund its bank accounts for the checks it has written until the checks are presented to the bank for payment, the "change in cash overdraft, net" line item as presented on the consolidated statement of cash flows represents the increase or decrease in outstanding checks for a given period.

Trade Accounts Receivable

Trade accounts receivable balances are received on average approximately 86 days from the date of invoice. Generally, the Company does not work on any projects where amounts due are expected to be received greater than one year from the date of the invoice. Accordingly, the recorded book value for the Company’s accounts receivable equals fair value. Outstanding trade accounts receivable are generally considered past due when they remain unpaid after the contractual due date has passed. An allowance for doubtful accounts receivable (allowance) is established using management’s judgment. Specific identification of balances that are significantly past due and where client payments have not been recently received are generally added to the allowance unless the Company has direct knowledge that the client intends to make payment. Additionally, any balances which relate to a client that has declared bankruptcy or ceased its business operations are added to the allowance at the amount not expected to be received.

The Company recorded a net bad debt recovery of less than $0.1 million in 2017. Bad debt expense, net of recoveries was approximately $0.2 million and $0.3 million in 2016 and 2015, respectively.

Property, Equipment and Capitalized Software Costs

Property and equipment are generally stated at historical cost less accumulated depreciation. Depreciation is computed using the straight-line method based on estimated useful lives of one year to 30 years, and begins after an asset has been placed into service. Leasehold improvements are generally depreciated over the shorter of the term of the lease or the useful life of the improvement. The cost of property or equipment sold or otherwise disposed of, along with related accumulated depreciation, is eliminated from the accounts, and the resulting gain or loss, if any, is reflected in current earnings. Maintenance and repairs are charged to expense when incurred, while significant improvements to existing assets are capitalized.

As of December 31, 2017 and 2016, the Company had capitalized costs relating to software projects developed for internal use. Amortization periods for these projects range from two to five years, and begin when the software, or enhancements thereto, is available for its intended use. Amortization periods are evaluated annually for propriety.

Impairment of Long-Lived Assets and Long-Lived Assets to Be Disposed Of

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When such circumstances exist, the recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of by sale, if any, are reported at the lower of the carrying amount or fair value less costs to sell. The Company does not have any long-lived assets that are impaired at December 31, 2017.

The Company was in the process of negotiating the sale of its corporate administrative building. The Company classified the corporate administration building as held for sale and did not record depreciation expense relative to the corporate administrative building during the 2017 fourth quarter. The carrying value of the property was approximately $1.6 million at December 31, 2017. In February 2018, the Company sold this property for $1.8 million.

Leases

The Company is obligated under a number of short and long-term operating leases, primarily for the rental of office space, office equipment, and for automobiles in our European operations. In instances where the Company has negotiated leases that contain rent holidays or escalation clauses, the expense for those leases is recognized monthly on a straight-line basis over the term of the lease.

Goodwill

The goodwill recorded on the Company's condensed consolidated balance sheet at December 31, 2015 related to CTG’s Healthcare Solutions (CTGHS) reporting unit. In accordance with current accounting guidance for “Intangibles - Goodwill and Other,” the Company performs goodwill impairment testing at least annually (in the Company’s fourth quarter), unless indicators of impairment exist in interim periods. The Company uses the two-step approach to test goodwill for potential impairment. Step One compares the estimated fair value of a reporting unit with goodwill to its carrying value. If the carrying value exceeds the estimated fair value, Step Two must be performed. Step Two compares the carrying value of the reporting unit to the fair value of all of the assets and liabilities of the reporting unit (including any unrecognized intangibles) as if the reporting unit was acquired in a business combination. If the carrying amount of a reporting unit’s goodwill exceeds the implied fair value of its goodwill, an impairment loss is recognized in an amount equal to the excess.

During the 2016 first quarter, the Company determined that a goodwill impairment indicator existed which required an interim impairment analysis. This impairment indicator was a significant and sustained decrease in the Company’s overall market capitalization, as the Company’s stock price in the 2016 first quarter fell by as much as 29% from its value at December 31, 2015. As a result of this indicator, the Company conducted an interim analysis of CTGHS to determine if an impairment existed. In performing the assessment, the Company estimated the fair value of CTGHS based on a combination of the income and market approaches. The income approach uses a discounted cash flow (DCF) method which utilizes the present value of expected future cash flows to estimate fair value of the reporting unit. The future cash flows for CTGHS was projected based on estimates of future revenue, operating income and other factors such as working capital and capital expenditures and a discount rate used in the present value calculation. As part of the projections, the Company took into account expected industry and market conditions for the healthcare industry, as well as trends currently affecting CTGHS. The market approach utilizes multiples of revenue and earnings before interest expense, taxes, depreciation and amortization (EBITDA) to estimate the fair value of the reporting unit. The market multiples used for CTGHS were based on competitor industry data, along with the market multiples for the Company and other factors. The Company also completed a comparison of its overall market capitalization to the market value of CTGHS and the Company’s other non-reporting business units. Based upon the analysis performed, the Company determined that the fair value of CTGHS was less than its carrying value, which required the Company to perform a Step Two goodwill impairment test.

As a result of the first quarter Step Two analysis, the Company determined the implied fair value of its goodwill balance was below the carrying value. Accordingly, the Company recorded a non-tax deductible goodwill impairment charge of $21.5 million to reduce the value of its goodwill balance to the implied fair value.

During the 2016 third quarter, the Company again determined that goodwill impairment indicators existed which required an interim impairment analysis. These impairment indicators were the unexpected decline in the revenue and profits of the CTGHS business unit, the resignation of both the sales leader (who was the Company’s former CEO) and delivery leader of CTGHS in the 2016 third quarter, effectively leaving the business unit without executive leadership, and a continued decrease in the Company's overall market capitalization. As a result of these indicators, the Company conducted an interim analysis of CTGHS to determine if an impairment existed. In performing the assessment, the Company again performed the procedures it had previously performed in the 2016 first quarter, as detailed above. The most significant changes in the Company's Step One analysis from the first quarter to the third quarter were reductions in the Company's estimates of future revenue and operating income based upon the unexpected negative trends experienced in the third quarter, as well as the resulting reductions in the revenue and EBITDA market multiples that correlate to the decline in our overall market capitalization. Based upon the analysis performed, the Company determined that the fair value of CTGHS was less than its carrying value, which required the Company to perform a Step Two goodwill impairment test.

As a result of the third quarter Step Two analysis, the Company determined the implied fair value of its goodwill balance was below the carrying value. Accordingly, the Company recorded a non-tax deductible goodwill impairment charge in the 2016 third quarter of $15.8 million which reduced the value of its goodwill balance to the implied fair value, or $0.0 as of September 30, 2016.

Income Taxes

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"), The Tax Act makes broad and complex changes to the U.S. tax code, including, but not limited to, (1) reducing the U.S. federal corporate tax rate from 35 percent to 21 percent; (2) requiring companies to pay a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries; (3) generally eliminating U.S. federal income taxes on dividends from foreign subsidiaries; (4) requiring a current inclusion in U.S. federal taxable income of certain earnings of controlled foreign corporations; (5) eliminating the corporate alternative minimum tax (AMT) and changing how existing AMT credits can be realized; (6) creating the base erosion anti-abuse tax (BEAT), a new minimum tax; (7) creating a new limitation on deductible interest expense; and (8) changing rules related to uses and limitations of net operating loss carryforwards created in tax years beginning after December 31, 2017.

Accounting Standards Codification (ASC) 740, Income Taxes, requires companies to recognize the effect of the tax law changes in the period of enactment. However, the SEC staff issued Staff Accounting Bulletin (SAB) 118, which allows companies to record provisional amounts during a measurement period that is similar to the measurement period used when accounting for business combinations. The Company has recorded a reasonable estimate when possible and with the understanding that the provisional amount is subject to further adjustments under SAB 118.

As a result, the Company has recorded the following provisional amounts in the financial statements, which will be revised, if necessary, as the computations become finalized during the measurement period.

Deferred tax assets and liabilities: The Company remeasured certain deferred tax assets and liabilities based on the federal rate at which they are expected to reverse in the future, which is generally 21%. The Company also remeasured the state rate at which certain deferred tax assets and liabilities are expected to reverse in the future associated with the reduction in the future federal benefit from state deferred tax assets and liabilities from 34% to 21%. However, the Company is still analyzing certain aspects of the Act relating to compensation expense and refining its calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of the Company's deferred tax balance was a tax expense of $1.7 million, including the remeasurement of its federal valuation allowance.

Foreign tax effects: The one-time transition tax is based on the Company's total post-1986 earnings and profits (E&P) that were previously deferred from U.S. income taxes. The Company currently estimates there will be no liability for the one-time transition tax for all of its foreign subsidiaries since the accumulated post-1986 earnings is currently estimated to be negative. The Company has not yet completed its calculation of the total post-1986 E&P for these foreign subsidiaries and this amount may change when the Company finalizes the calculation of post-1986 foreign E&P previously deferred from U.S. federal taxation and finalizes the amounts held in cash or other specified assets.

The Company has not provided for any additional outside basis difference inherent in its foreign subsidiaries, as these amounts continue to be indefinitely reinvested in foreign operations.

The Company has not yet made a policy election with respect to its treatment of potential global intangible low-taxed income (GILTI). Companies can either account for taxes on GILTI as incurred or recognize deferred taxes when basis differences exist that are expected to affect the amount of the GILTI inclusion upon reversal. The Company is still in the process of analyzing the provisions of the Act associated with GILTI and the expected impact of GILTI on the Company in the future.

The Company provides for deferred income taxes for the temporary differences between the financial reporting basis and the tax basis of the Company's assets and liabilities. In assessing the realizability of deferred tax assets, management considers within each tax jurisdiction, whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax-planning strategies in making this assessment. The Company recognizes, as applicable, accrued interest and penalties related to unrecognized tax benefits (if any) in tax expense.

The Company establishes an unrecognized tax benefit based upon the anticipated outcome of tax positions taken for financial statement purposes compared with positions taken on the Company's tax returns. The Company records the benefit for unrecognized tax benefits only when it is more likely than not that the position will be sustained upon examination by the taxing authorities. The Company reviews its unrecognized tax benefits on a quarterly basis. Such reviews include consideration of factors such as the cause of the action, the degree of probability of an unfavorable outcome, the Company's ability to estimate the liability, and the timing of the liability and how it will impact the Company's other tax attributes.

Equity-Based Compensation

The Company records the fair value of equity-based compensation expense for all equity-based compensation awards granted and recognizes the cost in the Company's income statement over the periods in which an employee or director is required to provide the services for the award. Compensation cost is not recognized for employees or directors that do not render the requisite services. The Company recognized the expense for equity-based compensation in its 2017, 2016, and 2015 statements of income on a straight-line basis based upon awards that are ultimately expected to vest. See note 10, "Equity-Based Compensation."

Net Income (Loss) Per Share

Basic and diluted earnings (loss) per share (EPS) for the years ended December 31, 2017, 2016, and 2015 are as follows:

For the year ended (amounts in thousands, except per-share data)	Net Income (loss)	Weighted Average Shares	Earnings (loss) per Share
December 31, 2017			
Basic EPS	$806	15,055	$ 0.05
Dilutive effect of outstanding equity instruments	—	269	(0.00)
Diluted EPS	$806	15,324	$ 0.05
December 31, 2016			
Basic EPS	$(34,638)	15,593	$ (2.22)
Dilutive effect of outstanding equity instruments	—	—	—
Diluted EPS	$(34,638)	15,593	$ (2.22)
December 31, 2015			
Basic EPS	$6,510	15,479	$ 0.42

Dilutive effect of outstanding equity instruments	—	441	(0.01)
Diluted EPS	$ 6,510	15,920	$ 0.41

Weighted-average shares represent the average number of issued shares less treasury shares and shares held in the Stock Trusts, and for the basic EPS calculations, unvested restricted stock.

Certain options representing 1.2 million, 1.9 million, and 1.0 million shares of common stock were outstanding at December 31, 2017, 2016, and 2015, respectively, but were not included in the computation of diluted earnings per share as their effect on the computation would have been anti-dilutive.

Accumulated Other Comprehensive Loss

The components that comprised accumulated other comprehensive loss on the consolidated balance sheets at December 31, 2017 and 2016 are as follows:

(amounts in thousands)	2017	2016
Foreign currency	$(5,963)	$(8,444)
Pension loss, net of tax of $527 in 2017, and $835 in 2016	(7,713)	(8,319)
Accumulated other comprehensive loss	$(13,676)	$(16,763)

During 2017, 2016, and 2015, actuarial losses were amortized to expense as follows:

(amounts in thousands)	2017	2016	2015
Amortization of actuarial losses	$322	$285	$390
Income tax	(57)	(63)	(88)
Net of tax	$265	$222	$302

The amortization of actuarial losses is included in determining net periodic pension cost. See note 7, "Deferred Compensation Benefits" for additional information.

Foreign Currency

The functional currency of the Company’s foreign subsidiaries is the applicable local currency. The translation of the applicable foreign currencies into U.S. dollars is performed for assets and liabilities using current exchange rates in effect at the balance sheet date, for equity accounts using historical exchange rates, and for revenue and expense activity using the applicable month’s average exchange rates. The Company recorded nominal losses in 2017, 2016, and 2015 from foreign currency transactions for balances settled during the year or intended to be settled as of each respective year-end.

Guarantees

The Company has a number of guarantees in place in our European operations which support office leases and performance under government projects. These guarantees totaled approximately $1.1 million at both December 31, 2017 and 2016, and generally have expiration dates ranging from March 2018 through April 2020.

Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," ("ASU 2014-09"). ASU 2014-09 outlines a new, single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. This new revenue recognition model provides a five-step analysis in determining when and how revenue is recognized. The new model will require revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration a company expects to receive in exchange for those goods or services. The pronouncement is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is only permitted in years beginning after December 31, 2016. The Company will apply the new standard using the cumulative effect method and will apply the requirements of the new standard to only projects that are open as of January 1, 2018.

The Company currently records approximately 97% of its annual revenue on a time-and-material and progress billing basis, with the remaining 3% recorded under a proportional method of accounting using an inputs based methodology for fixed price projects. For the 97% of the Company's revenue recorded under the time-and-material method of accounting, excluding the principal and agent considerations described below, the new standard will not change the timing or the amount of revenue that is recorded. The Company has also evaluated the revenue recorded under its fixed price projects to determine if the manner or timing of revenue recognition would change for existing projects. The impact of adopting this new accounting guidance will have an immaterial impact on the timing and amount of revenue recorded under its fixed price projects.

When more than one party is involved in providing goods or services to a customer, the standard requires an entity to determine whether it is a principal or an agent in these transactions by evaluating the nature of its promise to the customer. The fundamental premise of the principal and agent determination is the concept of control. The Company had recorded approximately 3% of its consolidated revenue on a net basis during 2017 under current accounting rules. Under the new standard, the Company will report gross revenue and expense for a significant portion of this revenue beginning January 1, 2018.

In November 2015, the FASB issued ASU 2015-17, "Balance Sheet Classifications of Deferred Taxes," which amended accounting guidance related to the presentation of deferred tax liabilities and assets. The amended guidance requires that all deferred tax liabilities and assets be classified as noncurrent on the balance sheet. This guidance was effective for reporting periods beginning after December 15, 2016. Upon adoption of this guidance in the 2017 first quarter, the Company reclassified approximately $0.9 million as of both March 31, 2017 and December 31, 2016 from current to non-current assets.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)," which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e. lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. Topic 842 supersedes the previous leases standard, ASC 840, Leases. This guidance is effective for reporting periods beginning after December 15, 2018; however, early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting," which amended accounting guidance related to seven aspects of the accounting for share-based payments award transactions. This guidance was effective for reporting periods beginning after December 15, 2016. During 2017, the Company recorded approximately $0.3 million of additional tax expense for tax shortfalls that would previously have been recorded to capital in excess of par value. We have adopted this guidance prospectively and prior periods have not been adjusted.

Additionally, the Company recorded $0.3 million, $0.4 million, and $0.6 million in 2017, 2016, and 2015, respectively, for taxes remitted for shares withheld from equity-based compensation transaction on the consolidated statements of cash flows in the "cash flows from financing activities" section.

Subsequent Event

On February 15, 2018, the Company acquired 100% of the equity of Soft Company for approximately $16.8 million. The acquisition was funded using cash on hand and borrowings under the Credit and Security Agreement. Soft Company, located in Paris, France, is an IT consulting company that specializes in providing IT services to finance, insurance, telecom, and media services companies. The acquisition of Soft Company is expected to enable the Company to expand its position in Europe and enhance its service offerings.

2. Property, Equipment and Capitalized Software

Property, equipment and capitalized software at December 31, 2017 and 2016 are summarized as follows:

December 31, (amounts in thousands)	Useful Life (years)	2017	2016
Land	—	$378	$378
Buildings	30	4,596	4,256
Equipment	2 - 5	5,451	6,204
Furniture	5 - 10	2,738	2,918
Capitalized software	2 - 5	2,064	1,111
Other software	1 - 5	2,204	2,000
Leasehold improvements	3 - 10	5,578	5,051
		23,009	21,918
Accumulated depreciation and amortization		(16,013)	(16,055)
		$6,996	$5,863

The Company recorded additions to capitalized software of $1.0 million and $0.5 million during the years ended December 31, 2017 and December 31, 2016, respectively. As of these dates the Company had capitalized a total of $2.1 million and $1.1 million, respectively, solely for software projects developed for commercial use. Accumulated amortization for these projects totaled $0.7 million and $0.3 million as of December 31, 2017 and 2016, respectively. Amortization expense for these projects totaled $0.3 million, $0.2 million, and $0.4 million in 2017, 2016, and 2015, respectively.

During the 2015 second quarter, the Company recorded expense for the impairment of one of its capitalized software projects related to IT medical management, primarily for chronic kidney disease, after determining that it had no net realizable value. Although the Company experienced some sales success with research institutions, the Company had been unable to sell the product to payers, its intended market, and discontinued the effort to sell the technology. The remaining net asset value, totaling approximately $1.1 million, was written-off to direct costs in the 2015 second quarter operating results.

3. Investments

The Company's investments consist of mutual funds which are part of the Computer Task Group, Incorporated Non-qualified Key Employee Deferred Compensation Plan. At December 31, 2017 and 2016, the Company's investment balances, which are classified as trading securities, totaled approximately $0.4 million and $0.4 million, respectively, and were measured at fair value. As there is an active trading market for these funds, fair value was determined using Level 1 inputs (see note 1 "Summary of Significant Accounting Policies—Fair Value"). Unrealized gains and losses on these securities are recorded in earnings and were nominal in 2017, 2016, and 2015.

4.Debt

In December 2017, the Company entered into a new credit and security agreement with its bank, which provides for a three-year revolving credit facility in an aggregate principal amount of $45.0 million, including a sublimit of $10.0 million for letters of credit and a $10.0 million sublimit for swing line loans. In connection with execution of the credit and security agreement, the Company concurrently repaid in full and terminated the credit agreement dated October 30, 2015.

The new agreement expires in December 2020, and has interest rates ranging from 150 to 200 basis points over LIBOR or the greater of (i) the prime rate, (ii) the federal fund effective rate plus 50 basis points, and (iii) adjusted LIBOR plus 100 basis points plus a spread ranging from 50 to 100 basis points based on the amounts outstanding under the Credit and Security Agreement. The Company can borrow under the agreement with either rate at its discretion. At December 31, 2017 and 2016, there was $4.4 million and $4.7 million outstanding under the respective revolving credit agreements. The Company borrows or repays its debt as needed based upon its working capital obligations, including the timing of the U.S. bi-weekly payroll.

The maximum amount outstanding under its credit agreements in 2017 and 2016 was $6.0 million and $4.7 million, respectively. In 2017 and 2016, the average amounts outstanding were $2.2 million and $1.9 million, respectively, and carried weighted-average interest rates of 3.0% and 2.9%, respectively. Total commitment fees incurred in 2017 and 2016 totaled approximately $0.1 million in each year, while interest paid in 2017 and 2016 totaled less than $0.1 million in each year.

Under the new agreement, the Company is required to meet certain financial covenants in order to maintain borrowings under its revolving credit line, pay dividends, and make acquisitions. The covenants are measured quarterly, and at December 31, 2017, included a fixed charge coverage ratio, which must be less than 1.10 to 1.00, consolidated earnings before interest, taxes, depreciation, and amortization (EBITDA) must be no less than $5.0 million for the trailing twelve months, and capital expenditures for property, plant, equipment, and capitalized software must be no more than

$5.0 million in any annual period. The fixed charge coverage ratio is only tested if availability on a measurement date is less than $5.625 million. Actual borrowings by CTG under the Credit Agreement are subject to a borrowing base, which is a formula based on certain eligible receivables and reserves. Total availability as of December 31, 2017 was approximately $28.9 million. The Company was in compliance with these covenants at December 31, 2017 as EBITDA was $6.8 million and capital expenditures for property, equipment and capitalized software were $2.5 million in 2017. The Company was also in compliance with its covenants at December 31, 2016 and December 31, 2015.

5. Income Taxes

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the “Tax Act”), The Tax Act makes broad and complex changes to the U.S. tax code, including, but not limited to, (1) reducing the U.S. federal corporate tax rate from 35 percent to 21 percent; (2) requiring companies to pay a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries; (3) generally eliminating U.S. federal income taxes on dividends from foreign subsidiaries; (4) requiring a current inclusion in U.S. federal taxable income of certain earnings of controlled foreign corporations; (5) eliminating the corporate alternative minimum tax (AMT) and changing how existing AMT credits can be realized; (6) creating the base erosion anti-abuse tax (BEAT), a new minimum tax; (7) creating a new limitation on deductible interest expense; and (8) changing rules related to uses and limitations of net operating loss carryforwards created in tax years beginning after December 31, 2017.

Accounting Standards Codification (ASC) 740, Income Taxes, requires companies to recognize the effect of the tax law changes in the period of enactment. However, the SEC staff issued Staff Accounting Bulletin (SAB) 118, which allows companies to record provisional amounts during a measurement period that is similar to the measurement period used when accounting for business combinations. The Company has recorded a reasonable estimate when possible and with the understanding that the provisional amount is subject to further adjustments under SAB 118.

As a result, the Company has recorded the following provisional amounts in the financial statements, which will be revised, if necessary, as the computations become finalized during the measurement period.

Deferred tax assets and liabilities: The Company remeasured certain deferred tax assets and liabilities based on the federal rate at which they are expected to reverse in the future, which is generally 21%. The Company also remeasured the state rate at which certain deferred tax assets and liabilities are expected to reverse in the future associated with the reduction in the future federal benefit from state deferred tax assets and liabilities from 34% to 21%. However, the Company is still analyzing certain aspects of the Act relating to compensation expense and refining its calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the remeasurement of the Company's deferred tax balance was a tax expense of $1.7 million, including the remeasurement of its federal valuation allowance.

Foreign tax effects: The one-time transition tax is based on the Company's total post-1986 earnings and profits (E&P) that were previously deferred from U.S. income taxes. The Company currently estimates there will be no liability for the one-time transition tax for all of its foreign subsidiaries since the accumulated post-1986 earnings is currently estimated to be negative. The Company has not yet completed its calculation of the total post-1986 E&P for these foreign subsidiaries and this amount may change when the Company finalizes the calculation of post-1986 foreign E&P previously deferred from U.S. federal taxation and finalizes the amounts held in cash or other specified assets.

The Company has not provided for any additional outside basis difference inherent in its foreign subsidiaries, as these amounts continue to be indefinitely reinvested in foreign operations.

The Company has not yet made a policy election with respect to its treatment of potential global intangible low-taxed income (GILTI). Companies can either account for taxes on GILTI as incurred or recognize deferred taxes when basis differences exist that are expected to affect the amount of the GILTI inclusion upon reversal. The Company is still in the process of analyzing the provisions of the Act associated with GILTI and the expected impact of GILTI on the Company in the future.

The provision for income taxes for 2017, 2016, and 2015 consists of the following:

(amounts in thousands)	2017	2016	2015
Domestic and foreign components of income (loss) before income taxes are as follows:			
Domestic	$591	$(35,100)	$9,867
Foreign	3,466	1,564	862
Total income (loss) before income taxes	$4,057	$(33,536)	$10,729
The provision (benefit) for income taxes consists of:			
Current tax:			
U.S. federal	$(570)	$47	$2,212
Foreign	1,458	1,533	1,085
U.S. state and local	116	101	495
Total current tax	1,004	1,681	3,792
Deferred tax:			
Enactment of the Tax Cuts and Jobs Act	1,704	—	—
U.S. federal	347	(584)	337
Foreign	(25)	28	(19)
U.S. state and local	221	(23)	109
Total deferred tax	2,247	(579)	427
Total tax	$3,251	$1,102	$4,219
The effective and statutory income tax rate can be reconciled as follows:			
Tax at statutory rate of 34%	$1,379	$(11,402)	$3,648
State tax, net of federal benefit	212	47	409
Non-taxable income	(573)	(495)	(576)
Non-deductible expenses	971	13,465	686
Change in estimate primarily related to foreign taxes	(69)	46	192
Change in estimate primarily related to U.S. federal taxes	—	—	178
Tax credits	(289)	(552)	(253)
Enactment of the Tax Cuts and Jobs Act	1,704	—	—
Foreign rate differential	(164)	(46)	69
Other, net	80	39	(134)
Total tax	$3,251	$1,102	$4,219
Effective income tax rate	80.1%	(3.3)%	39.3%

The Company’s effective tax rate (ETR) is calculated based upon the full year's operating results, and various tax related items. The Company’s normal ETR ranges from 38% to 40%. The ETR in 2017 was 80.1%, while the 2016 ETR was (3.3)%.

The ETR was higher than the normal range in 2017 primarily due to the effects of the Tax Cuts & Jobs Act which resulted in the Company reducing its U.S. deferred tax assets by $1.7 million and the adoption of ASU 2016-09, “Improvements to Employee Share-Based Payment Accounting,” which required the Company to record approximately $0.3 million in 2017 of additional tax expense for shortfalls that would previously have been recorded to capital in excess of par value on the Company’s consolidated balance sheet. This additional tax expense was partially offset by tax benefits for the Work Opportunity Tax Credit (WOTC) and Research and Development tax credit (R&D).

The ETR was lower than the normal range in 2016 primarily due to the non-deductible goodwill impairment charges totaling $37.3 million in the 2016 first and third quarters, and also due to the extension of the Work Opportunity Tax Credit (WOTC) and the Research and Development tax credit (R&D) which were renewed by the U.S. federal government in the 2015 fourth quarter and were effective for all of 2016. These credits totaled approximately $0.6 million.

The expected relationship between foreign income before taxes and the foreign provision for income taxes differs from the actual relationship above in 2016 and 2015 as a result of certain foreign losses incurred for which no tax benefit has been recognized. Management has determined that it is unclear whether operations in those jurisdictions will produce taxable income in future years sufficient to realize the benefit of the losses in those jurisdictions. In addition, certain costs deducted for financial statement purposes are not deductible for tax purposes in some foreign jurisdictions, such as various employee benefit costs, resulting in a substantial increase to foreign taxable income.

The Company’s deferred tax assets and liabilities at December 31, 2017 and 2016 consist of the following:

December 31, (amounts in thousands)	2017	2016
Assets		
Deferred compensation	$4,348	$6,735
Loss and credit carryforwards	1,362	1,568
Accruals deductible for tax purposes when paid	247	403
Depreciation	15	63
Allowance for doubtful accounts	15	150
State taxes	556	593
Other	24	24
Gross deferred tax assets	6,567	9,536
Deferred tax asset valuation allowance	(2,505)	(2,650)
Gross deferred tax assets less valuation allowance	4,062	6,886
Liabilities		
Other	(229)	—
Gross deferred tax liabilities	(229)	—
Net deferred tax assets	$3,833	$6,886
Net deferred tax assets and liabilities are recorded as follows:		
Net non-current assets	$3,861	$6,886
Net non-current liabilities	(28)	—
Deferred tax assets, net of deferred tax liabilities	$3,833	$6,886

The significant decrease in net deferred tax assets is due to the Tax Act, which resulted in the Company reducing its U.S. deferred tax assets by $1.7 million. In assessing the realizability of deferred tax assets, management considers, within each taxing jurisdiction, whether it is more likely than not that all or some portion of the deferred tax assets will be realized, or that a valuation allowance is required. Management considers all available evidence, both positive and negative, in assessing realizability of its deferred tax assets. A key component of this assessment is management’s critical evaluation of current and future impacts of business and economic factors on the Company’s ability to generate future taxable income. Factors that may affect the Company’s ability to generate taxable income include, but are not limited to: increased competition, a decline in revenue or margins, a loss of market share, the availability of qualified professional staff, and a decrease in demand for the Company’s services. Based on the Company’s long history of profitability for tax purposes and expected profitability in future years and assessment of the factors discussed above, management has determined that it is more likely than not that it will realize its U.S. deferred tax assets, and accordingly no valuation allowance has been recorded against these assets. Additionally, management has determined that valuation allowances are required against its UK, Netherlands, and India deferred taxes. The total valuation allowance recorded against these deferred tax assets is $2.4 million, a decrease of $0.2 million during the year.

The Company has various U.S. state net operating loss carryforwards of $0.2 million which begin to expire in 2021 and has recorded a valuation allowance of $0.1 million against these assets. The Company has U.S. federal credit carryovers of $0.3 million, which expire in 2037. The Company has net operating loss carryforwards in the Netherlands, United Kingdom, and Belgium of $0.5 million, $3.9 million, and $0.2 million, respectively. The carryforwards in the Netherlands expire between 2018 and 2024, and the carryforwards in the United Kingdom and

Belgium have no expiration date.

The Company files income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years prior to 2014.

At December 31, 2017, the Company believes it has adequately provided for its tax-related liabilities, and that no reserve for unrecognized tax benefits is necessary. No significant change in the total amount of unrecognized tax benefits is expected within the next twelve months. The Company recognizes accrued interest and penalties related to unrecognized tax benefits (if any) in tax expense, as applicable. At December 31, 2017, the Company had no accrual for the payment of interest and penalties.

At December 31, 2017, the undistributed earnings of the Company's foreign subsidiaries are considered to be indefinitely reinvested and, accordingly, no provision for taxes has been provided thereon. Given the complexities of the foreign tax credit calculations, it is not practicable to compute the tax liability that would be due upon distribution of those earnings in the form of dividends or liquidation or sale of the foreign subsidiaries.

During 2017, the Company recorded approximately $0.3 million of additional tax expense for tax shortfalls that would previously have been recorded in excess of par value. In 2016 and 2015, the Company recorded tax expense (benefit) to capital in excess of par value in the amounts of $0.2 million and $(0.4) million, respectively. These tax benefits have also been recognized in the consolidated balance sheets as an increase (reduction) of income taxes payable.

Net income tax payments during 2017, 2016, and 2015 totaled $1.6 million, $2.1 million, and $2.2 million, respectively.

6. Lease Commitments

At December 31, 2017, the Company was obligated under a number of long-term operating leases, some of which contain renewal options with escalation clauses commensurate with local market fluctuations, however, generally limiting an annual increase to no more than 5.0% of the existing lease payment.

Minimum future obligations under such leases as of December 31, 2017 are summarized as follows:

(amounts in thousands)	
2018	$4,610
2019	2,719
2020	1,768
2021	1,129
2022	613
Later years	430
Minimum future obligations	$11,269

The operating lease obligations relate to the rental of office space, office equipment, and automobiles leased in Europe. Total rental expense under such operating leases for 2017, 2016, and 2015 was approximately $5.9 million, $5.7 million, and $6.1 million, respectively.

7. Deferred Compensation Benefits

The Company maintains a non-qualified defined-benefit Executive Supplemental Benefit Plan (ESBP) that provides certain former key executives with deferred compensation benefits, based on years of service and base compensation, payable during retirement. The plan was amended as of November 30, 1994, to freeze benefits for the participants in the plan at that time.

The Company also retained certain potential obligations related to a contributory defined-benefit plan for its previous employees located in the Netherlands (NDBP) when the Company disposed of its subsidiary, CTG Nederland, B.V. Benefits paid are a function of a percentage of career average pay. This plan was curtailed for additional contributions in January 2003.

During 2017, the Company determined that its fully funded pension plan related to Belgium employees (BPP), which the Company had historically accounted for as a defined contribution plan, should have been reported as a defined benefit plan. The impact of the error on the historical financial statements was immaterial. The Company recorded an increase to noncurrent assets and an offsetting adjustment primarily to direct costs of approximately $0.3 million, and an increase in income tax expense and deferred tax liabilities of approximately $0.1 million to correct the accounting during the 2017 third quarter.

Net periodic pension cost for the years ended December 31, 2017, 2016, and 2015 for the plans is as follows:

Net Periodic Pension Cost (amounts in thousands)	2017	2016	2015
Service cost	$263	$-	$-
Interest cost	$553	$483	$464
Expected return on assets	$(597)	$(286)	$(286)
Amortization of actuarial loss	$328	$292	$395
Net periodic pension cost	$547	$489	$573

The change in benefit obligation and reconciliation of fair value of plan assets for the years ended December 31, 2017 and 2016 for the ESBP, NDBP, and BPP plans are as follows:

Changes in Benefit Obligation (amounts in thousands)	2017	2016
Benefit obligation at beginning of period	$28,460	$27,541
Interest cost	552	483
Benefits paid	(1,053)	(839)
Actuarial loss (gain)	(1,567)	1,797
Effect of exchange rate changes	3,105	(522)
Benefit obligation at end of period	29,497	28,460
Reconciliation of Fair Value of Plan Assets		
Fair value of plan assets at beginning of period	15,378	15,564
Actual return on plan assets	69	221
Employer contributions	1,152	691
Benefits paid	(1,052)	(839)
Effect of exchange rate changes	2,142	(259)
Fair value of plan assets at end of period	17,689	15,378
Accrued benefit cost	$11,808	$13,082

Accrued benefit cost for the ESBP, NDBP, and BPP is included in the consolidated balance sheet as follows:

	ESBP	NDBP	BPP
As of December 31, 2017:			
Non-current assets	$—	$—	$96
Current liabilities	$659	$—	$—
Non-current liabilities	$5,750	$5,495	$—

Discount rates:			
Benefit obligation	3.06 %	1.80 %	1.62 %
Net periodic pension cost	3.41 %	1.30 %	1.65 %
Salary increase rate	— %	— %	1.85 %
Expected return on plan assets	— %	4.00 %	3.25 %
As of December 31, 2016:			
Non-current assets	$—	$—	$84
Current liabilities	$651	$—	$—
Non-current liabilities	$6,149	$6,366	$—
Discount rates:			
Benefit obligation	3.41 %	1.30 %	1.65 %
Net periodic pension cost	3.51 %	2.00 %	1.65 %
Salary increase rate	— %	— %	1.85 %
Expected return on plan assets	— %	4.00 %	3.25 %

For the ESBP, the accumulated benefit obligation at December 31, 2017 and 2016 was $6.4 million and $6.8 million, respectively. The amounts included in other comprehensive loss relating to the pension loss adjustment in 2017 and 2016, net of tax, were both approximately $(0.4) million. The discount rate used in 2017 was 3.06%, which is reflective of a series of bonds that are included in the Moody's Aa long-term corporate bond yield whose cash flow approximates the payments to participants under the ESBP for the remainder of the plan. This rate was a decrease of 35 basis points from the rate used in the prior year and resulted in an increase in the plan's liabilities of approximately $0.15 million. Benefits paid to participants are funded by the Company as needed, and are expected to total approximately $0.7 million in 2018. The plan is deemed unfunded as the Company has not specifically identified Company assets to be used to discharge the deferred compensation benefit liabilities. The Company has purchased insurance on the lives of certain plan participants in amounts considered sufficient to reimburse the Company for the costs associated with the plan for those participants. The Company does not anticipate making contributions to the plan other than for current year benefit payments as required in 2018 or future years.

For the NDBP, the accumulated benefit obligation at December 31, 2017 and 2016 was $13.4 million and $13.3 million, respectively. The discount rate used in 2017 was 1.80%, which is reflective of a series of corporate bonds whose cash flow approximates the payments to participants under the NDBP for the remainder of the plan. This rate was an increase of 50 basis points from the rate used in the prior year due to changes in the economic environment in Europe, and resulted in a decrease in the plan's liabilities of $1.4 million in 2017.

The assets for the NDBP are held by Aegon, a financial services firm located in the Netherlands. The Company maintains a contract with Aegon to insure future benefit payments of the NDBP; however, due to certain terms of the agreement and potential obligations to the Company, the NDBP has not been settled. The benefit payments to be made in 2018 are expected to be paid by Aegon from plan assets. The assets for the plan are included in a general portfolio of government bonds, a portion of which is allocated to the NDBP based upon the estimated pension liability associated with the plan. The fair market value of the plan's assets equals the contractual value of the NDBP in any given year. The fair value of the assets is determined using a Level 3 methodology (see note 1 "Summary of Significant Accounting Policies—Fair Value"). In 2017 and 2016, the plan investments had a targeted minimum return of 4.0%, which is consistent with historical returns and the 4.0% return guaranteed to the participants of the plan. Aegon intends to maintain the current investment strategy of investing plan assets solely in government bonds in 2018.

For the BPP, the accumulated benefit obligation at December 31, 2017 and 2016 was $9.7 million and $8.4 million, respectively. The discount rate used in 2017 was 1.62%, which is reflective of a series of corporate bonds whose cash flows approximates the payments to participants under the BPP for the remainder of the plan. This rate was a decrease of 3 basis points from the rate used in the prior year.

The assets for the BDBP are held by Allianz, a financial services firm located in Belgium. The Company maintains a contract with Allianz to insure future benefit payments of the BDBP. Contributions made by the Company to Allianz are based on employees' current salaries. The benefit payments to be made in 2018 are expected to be paid by Allianz from plan assets. The assets for the plan are included in the overall portfolio of assets held by Allianz. The fair market value of the plan's assets equals the contractual value of the BDBP in any given year (which is the mathematical reserve held by Allianz). The fair value of the assets is determined using a Level 3 methodology (see note 1 "Summary of Significant Accounting Policies—Fair Value"). Allianz does not guarantee a minimum return on the plan investments, whereas Belgian law sets a minimum return to be guaranteed to the participants of the plan.

Anticipated benefit payments for the ESBP, NDBP, and BPP expected to be paid in future years are as follows:

(amounts in thousands)	
2018	$888

2019	920
2020	922
2021	1,085
2022	1,075
2023 - 2027	5,351
Total	$10,241

For the ESBP, NDBP, and BPP, the amounts included in accumulated other comprehensive loss, net of tax, that have not yet been recognized as components of net periodic benefit cost as of December 31, 2017 are $1.4 million, $6.1 million, and $0.3 million, respectively, for unrecognized actuarial losses. The amounts included in accumulated other comprehensive loss, net of tax, that had not yet been recognized as components of net periodic benefit cost as of December 31, 2016 were $1.4 million and $6.9 million, and $0.0 million, respectively, also for unrecognized actuarial losses.

The amounts recognized in other comprehensive income (loss), net of tax, for 2017, 2016, and 2015, which primarily consist of an actuarial gain (loss) related to year-over-year changes in the discount rate, totaled $0.6 million, $(1.4) million, and $2.8 million (primarily due to the decrease in the discount rate for the NDBP), respectively. Net periodic pension benefit (cost), and the amounts recognized in other comprehensive loss, net of tax, for the ESBP, NDBP, and BPP for 2017, 2016, and 2015 totaled $0.1 million, $(1.8) million, and $2.3 million, respectively.

The amounts in accumulated other comprehensive loss expected to be recognized as components of net periodic benefit cost during 2018 for the ESBP, NDBP, and BPP for unrecognized actuarial losses total $0.3 million.

The Company also maintains the Key Employee Non-Qualified Deferred Compensation Plan for certain key executives. Company contributions to this plan, if any, are based on annually defined financial performance objectives. There were $0.1 million in contributions to the plan in 2017 for amounts earned in 2016, $0.2 million in contributions to the plan in 2016 for amounts earned in 2015, and $0.1 million in contributions to the plan in 2015 for amounts earned in 2014. The Company anticipates making contributions in 2018 totaling approximately $0.1 million to this plan for amounts earned in 2017. The investments in the plan are included in the total assets of the Company, and are discussed in note 3, "Investments." Participants in the plan have the ability to purchase stock units from the Company at current market prices using their available investment balances within the plan. In return for the funds received, the Company releases shares out of treasury stock equivalent to the number of share units purchased by the participants. These shares of common stock are not entitled to any voting rights, but will receive dividends in the event any are paid. The shares are being held by the Company, and will be released to the participants as prescribed by their payment elections under the plan.

The Company maintains the Non-Employee Director Deferred Compensation Plan for its non-employee directors. Cash contributions were made to the plan for certain of these directors totaling approximately $0.5 million in 2017, $0.4 million in 2016 and $0.5 million in 2015. At the time the contributions were made, the non-employee directors elected to purchase stock units from the Company at current market prices using their available investment balance within the plan. Consistent with the Key Employee Non-Qualified Deferred Compensation Plan, in return for funds received, the Company released shares out of treasury stock equivalent to the number of share units purchased by the participants. These shares of common stock are not entitled to any voting rights, but will receive dividends in the event any are paid. The shares are being held by the Company, and will be released to the participants as prescribed by their payment elections under the plan.

8. Employee Benefits

401(k) Profit-Sharing Retirement Plan

The Company maintains a contributory 401(k) profit-sharing retirement plan covering substantially all U.S. employees. At its discretion, the Company may match up to 50% of the first 6% of eligible wages contributed by the participants. This match was indefinitely suspended as of January 1, 2017. Company contributions, net of forfeitures, which currently consist of cash and may include the Company's stock, were funded and charged to operations in the amounts of $0.0 million, $2.0 million, and $3.0 million for 2017, 2016, and 2015, respectively.

Other Retirement Plans

The Company maintains various other defined contribution retirement plans covering substantially all of the remaining European employees. Company contributions charged to operations were $0.2 million in 2017, $0.1 million in 2016, and $0.2 million in 2015.

Employee Health Insurance

The Company provides various health insurance plans for its employees, including a self-insured plan for its salaried and hourly employees in the U.S. In 2015, the Company began offering compliant healthcare coverage as required under The Patient Protection and Affordable Care Act (PPACA). Where possible, the Company has passed the cost of this coverage on to its customers where the employees that elect this coverage are engaged.

9. Shareholders' Equity

Employee Stock Purchase Plan

Under the Company's First Employee Stock Purchase Plan (ESPP), employees may apply up to 10% of their compensation to purchase the Company's common stock. Shares are purchased at the closing market price on the business day preceding the date of purchase. As of December 31, 2017, approximately 107,000 shares remain unissued under the ESPP. During 2017, 2016, and 2015, approximately 29,000, 44,000, and 37,000 shares, respectively, were purchased under the ESPP at an average price of $5.29, $4.91, and $7.38 per share, respectively.

Stock Trusts

The Company previously maintained a Stock Employee Compensation Trust (SECT) to provide funding for existing employee stock plans and benefit programs. Shares of the Company's common stock were purchased by and released from the SECT by the trustee of the SECT at the request of the compensation committee of the Board of Directors. During 2016, the SECT was dissolved, and all shares remaining in the SECT, totaling approximately 2.7 million shares, were transferred into treasury stock. There were 503,000 and 98,000 shares, respectively, released by the SECT during 2016 (prior to the dissolution of the SECT) and 2015. No shares were purchased by the SECT during 2017, 2016, and 2015, and previously there were 3.2 million shares in the SECT at December 31, 2015.

The Company created an Omnibus Stock Trust (OST) to provide funding for various employee benefit programs. Shares of the Company's common stock are released from the OST by the trustee at the request of the compensation committee of the Board of Directors. The OST was also dissolved during 2016, and the remaining 59,000 shares were transferred into treasury stock. There were no shares purchased or released by the OST during 2017, 2016, or 2015, and previously there were 59,000 shares in the OST at December 31, 2015.

Preferred Stock

At December 31, 2017 and 2016, the Company had 2.5 million shares of par value $0.01 preferred stock authorized for issuance, but none outstanding.

10. Equity-Based Compensation

The Company issues stock options and restricted stock in exchange for employee and director services. In accordance with current accounting standards, the calculated cost of its equity-based compensation awards is recognized in the Company's consolidated statements of income over the period in which an employee or director is required to provide the services for the award. Compensation cost will not be recognized for employees or directors that do not render the requisite services. The Company recognizes the expense for equity-based compensation in its consolidated income statements on a straight-line basis based upon the number of awards that are ultimately expected to vest.

Equity-based compensation expense, the corresponding tax benefit and net equity-based compensation expense for 2017, 2016, and 2015 are as follows:

	2017	2016	2015
(amounts in thousands)			
Equity-based compensation expense	$1,059	$1,626	$1,317
Tax benefit	312	516	413

Net equity-based compensation expense	$747	$1,110	$904

On May 12, 2010, the shareholders approved the Company’s 2010 Equity Award Plan (2010 Plan). Under the provisions of the 2010 Plan, stock options, restricted stock, stock appreciation rights, and other awards may be granted or awarded to employees and directors of the Company, as well as non-employees. The compensation committee of the Board of Directors determines the nature, amount, pricing and vesting of the grants or awards. All options and awards remain in effect until the earliest of the expiration, exercise, or surrender date. Options generally become exercisable in three or four equal installments, typically beginning one year from the date of grant, and expire no more than 15 years from the date of grant. A total of 3,750,000 shares may be granted or awarded under the 2010 plan, 2,200,000 of which are available for grant as of December 31, 2017.

On April 26, 2000, the shareholders approved the Company’s 2000 Equity Award Plan (Equity Plan). Under the provisions of the Equity Plan, stock options, restricted stock, stock appreciation rights, and other awards could previously be granted or awarded to employees and directors of the Company. The compensation committee of the Board of Directors determined the nature, amount, pricing, and vesting of the grants or awards. All options and awards remain in effect until the earlier of the expiration, exercise, or surrender date. Options generally become exercisable in three or four equal annual installments, typically beginning one year from the date of grant, and expire no more than 15 years from the date of grant. In certain limited instances, options granted at fair market value were expected to vest nine and one-half years from the date of grant. There are no shares or options available for grant under this plan as of December 31, 2017.

Under the Company's 1991 Restricted Stock Plan, a total of 800,000 shares of restricted stock may be granted to certain key employees, 4,000 of which are available for grant as of December 31, 2017.

The Company granted 23,600 stock options during the 2017 fourth quarter. The options have a fair value of $1.43 per share using a Black-Scholes valuation model. The assumptions used to calculate that fair value include the price on date of grant of $4.98, an expected life of 3.7 years, expected volatility of 34.5%, an expected dividend yield of zero, and a risk free rate of 2.0%. The options vest ratably over three years, and are being expensed over that period. The Company also granted 24,900 stock options during the 2017 second quarter. Both option grants were granted from the 2010 Equity Award Plan.

The Company utilizes the Black-Scholes option-pricing model to estimate the fair value of stock options granted on the date of grant. The per-option weighted-average fair value on the date of grant of stock options granted in 2017, 2016, and 2015 was $1.64, $0.96, and $2.17, respectively.

The fair value of the options at the date of grant was estimated using the following weighted-average assumptions for the years ended December 31, 2017, 2016, and 2015:

	2017	2016	2015
Expected life (years)	3.9	4.2	4.4
Dividend yield	0.0 %	4.8 %	3.2 %
Risk-free interest rate	1.9 %	1.2 %	1.4 %
Expected volatility	35.8 %	36.2 %	44.2 %

The Company used historical volatility calculated using daily closing prices for its common stock over periods that equal the expected term of the options granted to estimate the expected volatility for the grants made in 2015, 2016, and 2017. The risk-free interest rate assumption was based upon U.S. Treasury yields appropriate for the expected term of the Company's stock options based upon the date of grant. The expected term of the stock options granted was based upon the options expected vesting schedule and historical exercise patterns. The Company did not pay a dividend in 2017 and does not anticipate paying a dividend in the future. The expected dividend yield in 2016 and 2015 was based upon the Company's recent history of paying dividends since 2013, and the expectation of paying dividends in the foreseeable future at the time of the grant.

During 2015, 2016, and 2017, the Company issued restricted stock to certain employees. The stock vests over a period of four years, with 25% of the stock issued vesting one year from the date of grant, and another 25% vesting each year thereafter until the stock is fully vested. The Company is recognizing compensation expense for these shares ratably over the expected term of the restricted stock, or four years. In the event the Company issued stock to its independent directors, the stock vests at retirement. As the directors are eligible for retirement from the Company's Board of Directors at any point in time, the Company will recognize the expense associated with these shares on the date of grant. The shares of restricted stock issued are considered outstanding, can be voted, and are eligible to receive dividends, if any are paid. However, the restricted shares do not include a non-forfeitable right for the holder to receive dividends and none will be paid in the event the awards do not vest. Accordingly, only vested shares of outstanding restricted stock are included in the calculation of basic earnings per share.

During 2017, the Company granted 196,015 shares with a market condition to senior management. The closing price of the Company’s stock on that day was $5.75 per share. Under these grant agreements, the Company’s stock price must increase 50% to $8.63 for a 30-day period within a three-year period from the date of grant for 50% of the grants to vest. The Company’s stock price must increase 100% to $11.50 for a 30-day period within a three-year period from the date of grant for the remaining 50% of the grants to vest.

For these performance grants, the price on the date of grants was $5.75 per share, the expected volatility was 36.2%, the expected dividend yield is zero, and the risk-free rate of return was 1.49%. Given these assumptions, the tranche of the grants that will vest with a 50% increase in the stock price have a value using a binomial model of $1.63 per share, and a derived service period of 1.22 years. For the tranche of the grants that will vest with a 100% increase in the stock price, the value of the shares is $0.95 per share and have a derived service period of 1.79 years. The Company is expensing these grants over the derived service period as noted for each tranche of a grant. Of the 196,015 performance shares granted during 2017, 17,400 shares were canceled during 2017, and 178,615 shares were outstanding as of December 31, 2017.

As of December 31, 2017, total remaining stock-based compensation expense for non-vested equity-based compensation was approximately $2.1 million, which is expected to be recognized on a weighted-average basis over the next 16 months. Historically, the Company has issued shares out of treasury stock or the SECT to fulfill the share requirements from stock option exercises and restricted stock grants.

A summary of stock option activity under the 2010 Plan and Equity Plan is as follows:

	2010 Plan Options	Weighted-Average Exercise Price	Equity Plan Options	Weighted-Average Exercise Price
Outstanding at December 31, 2014	631,846	$ 15.89	1,868,597	$ 4.82
Granted	282,500	$ 7.51	—	$ —
Exercised	—	$ —	(473,472)	$ 4.66
Canceled or forfeited	(13,500)	$ 17.87	—	$ —
Expired	(80,375)	$ 13.49	(38,750)	$ 4.13
Outstanding at December 31, 2015	820,471	$ 13.21	1,356,375	$ 4.89
Granted	180,384	$ 4.95	—	$ —
Exercised	—	$ —	(182,500)	$ 4.27
Canceled or forfeited	—	$ —	—	$ —
Expired	—	$ —	(2,950)	$ 5.79
Outstanding at December 31, 2016	1,000,855	$ 11.72	1,170,925	$ 4.98
Granted	48,500	$ 5.38	—	
Exercised	—	$ —	(232,750)	$ 4.09
Canceled or forfeited	(17,350)	$ 9.73	—	$ —
Expired	(144,950)	$ 9.73	(203,750)	$ 5.48
Outstanding at December 31, 2017	887,055	$ 11.74	734,425	$ 5.13
Options Exercisable at December 31, 2017	552,254	$ 14.87	734,425	$ 5.13

For 2017, 2016, and 2015, there were no shares exercised under the 2010 plan. For 2017, 2016, and 2015, the intrinsic value of the options exercised under the Equity Plan was $0.3 million, $0.3 million, and $1.6 million, respectively. At December 31, 2017, there were no options remaining outstanding under the 1991 Plan. There were no shares exercised under the 1991 Plan during 2017 and 2016. There were 127,000 shares exercised under the 1991 Plan during 2015. The intrinsic value of the shares exercised under the 1991 Plan in 2015 was $0.2 million.

A summary of restricted stock activity under the 2010 Plan, the Equity Plan and the 1991 Restricted Stock Plan is as follows:

	2010 Plan Restricted Stock	Weighted-Average Fair Value	Equity Plan Restricted Stock	Weighted-Average Fair Value	1991 Restricted Stock Plan	Weighted-Average Fair Value
Outstanding at Dec. 31, 2014	11,700	$ 16.93	141,500	$ 5.04	173,233	$ 16.70
Granted	68,848	$ 7.36	—	$ —	116,000	$ 7.50
Released	(2,924)	$ 16.93	—	$ —	(74,008)	$ 15.59
Canceled or forfeited	—	$ —	—	$ —	(25,700)	$ 16.92
Outstanding at Dec. 31, 2015	77,624	$ 8.44	141,500	$ 5.04	189,525	$ 11.48
Granted	537,160	$ 4.74	—	$ —	16,371	$ 4.95
Released	(19,130)	$ 8.82	(80,000)	$ 4.97	(66,269)	$ 13.05
Canceled or forfeited	(188,736)	$ 4.97	—	$ —	(55,275)	$ 8.45
Outstanding at Dec. 31, 2016	406,918	$ 5.14	61,500	$ 5.13	84,352	$ 10.96
Granted	292,342	$ 5.66	—	—	57,900	$ 5.75
Released	(101,960)	$ 5.39	(21,500)	$ 5.44	(32,823)	$ 14.41
Canceled or forfeited	(90,264)	$ 5.11	—	—	(18,975)	$ 9.10
Outstanding at Dec. 31, 2017	507,036	$ 5.40	40,000	$ 4.97	90,454	$ 6.76

Options Outstanding at December 31, 2017

A summary of stock options that were outstanding at December 31, 2017 for the 2010 Plan and the Equity Plan is as follows:

Range of Exercise Prices:	Number of Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
2010 Plan				
$4.95 - $7.52	391,584	$ 6.06	8.3	$ 29,890
$12.16 - $13.75	242,375	$ 13.37	7.9	—
$15.04 - $16.93	105,096	$ 15.83	5.6	—
$20.68 - $21.41	148,000	$ 21.17	8.7	—
	887,055	$ 11.74	7.9	$ 29,890
Equity Plan				
$3.25 - $4.90	458,425	$ 4.31	3.0	$ 360,384
$5.25 - $7.18	276,000	$ 6.48	5.2	—

734,425	$ 5.13	3.8	$ 360,384

Options Exercisable at December 31, 2017

A summary of stock options that are exercisable at December 31, 2017 for the 2010 Plan and the Equity Plan is as follows:

Range of Exercise Prices:	Number of Options Exercisable	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value
2010 Plan				
$4.95 - $7.52	71,346	$ 5.88	8.3	$ 6,764
$12.16 - $13.75	242,375	$ 13.37	7.9	—
$15.04 - $16.93	90,533	$ 15.65	5.5	—
$20.68 - $21.41	148,000	$ 21.17	8.7	—
	552,254	$ 14.87	7.8	$ 6,764
Equity Plan				
$3.25 - $4.90	458,425	$ 4.31	3.0	$ 360,384
$5.25 - $7.18	276,000	$ 6.48	5.2	—
	734,425	$ 5.13	3.8	$ 360,384

The aggregate intrinsic values as calculated in the above charts detailing options that are outstanding and those that are exercisable, respectively, are based upon the Company’s closing stock price on December 31, 2017 of $5.10 per share.

11. Significant Customers

In 2017, International Business Machines Corporation (IBM) was the Company’s largest customer. During the 2017 third quarter, the NTS Agreement with IBM was extended for two years and now expires on December 31, 2019. In 2017, 2016, and 2015, IBM accounted for $76.4 million or 25.4%, $98.4 million or 30.3%, and $99.2 million or 26.9% of the Company’s consolidated revenue, respectively. The Company’s accounts receivable from IBM at December 31, 2017 and 2016 amounted to $21.5 million and $28.0 million, respectively.

In 2017, SDI was the Company's second largest customer and accounted for $34.2 million or 11.4%, $34.5 million or 10.6%, and $44.0 million or 11.9% of the Company’s consolidated revenue in 2017, 2016, and 2015, respectively. SDI acts as a vendor manager for Lenovo, and all of the Company's revenue generated through SDI relates to CTG employees working at Lenovo. The Company's accounts receivable from SDI at December 31, 2017 and 2016 totaled $4.7 million and $5.6 million, respectively.

No other customer accounted for more than 10% of revenue in 2017, 2016, or 2015.

12. Contingencies

The Company and its subsidiaries are involved from time to time in various legal proceedings and tax audits arising in the ordinary course of business. At December 31, 2017 and 2016, the Company was in discussion with various governmental agencies relative to tax matters, including income, sales and use, and property and franchise taxes. The outcome of these audits and legal proceedings, as applicable, involving the Company and its subsidiaries cannot be predicted with certainty, and the amount of any liability that could arise with respect to such audits cannot be accurately predicted. However, as none of these matters are individually or in the aggregate significant and as management has recorded an estimate of its potential liability for these audits at December 31, 2017 and 2016, and the Company does not have any open legal proceedings, the Company does not expect the conclusion of these matters to have a material adverse effect on the financial position, results of operations, or cash flows of the Company.

13. Enterprise-Wide Disclosures

The Company operates in one industry segment, providing IT services to its clients. The services provided include managed and flexible staffing and the planning, design, implementation, and maintenance of comprehensive IT solutions. All of the Company’s revenue is generated from these services.

CTG’s reportable information is based on geographical areas. The accounting policies of the individual geographical areas are the same as those described in note 1, “Summary of Significant Accounting Policies.”

Financial Information About Geographic Areas (amounts in thousands)	2017	2016	2015
Revenue from External Customers:			
United States	$219,886	$253,955	$301,826
Belgium (1)	39,347	35,995	35,931
Luxembourg (1)	36,954	31,441	28,562
Other European country	4,824	3,193	2,814
Other country	199	309	345
Total foreign revenue	81,324	70,938	67,652
Total revenue	$301,210	$324,893	$369,478
Long-lived Assets:			
United States	$5,206	$4,280	$4,208
United Kingdom (2)	1,005	792	461
Other European countries	782	791	819
Other Country	3	—	—
Total long-lived assets	$6,996	$5,863	$5,488
Deferred Tax Assets, Net of Valuation Allowance:			
United States	$3,810	$6,886	$6,352
Europe	51	—	54
Total deferred tax assets, net	$3,861	$6,886	$6,406

(1) Revenue for our Belgium and Luxembourg operations has been disclosed separately as it exceeds 10% of consolidated revenue in at least one of the years presented.
(2) Long-lived assets for our United Kingdom operations has been disclosed separately as it exceeds 10% of consolidated long-lived assets in at least one of the years presented.

14. Quarterly Financial Data (Unaudited)

	Quarters				
	First	Second (1)	Third (2)	Fourth (3)	Total
(amounts in thousands, except per-share data)					
2017					
Revenue	$77,006	$75,521	$ 74,039	$74,644	$301,210
Direct costs	62,777	61,864	61,010	59,476	245,127
Gross profit	14,229	13,657	13,029	15,168	56,083
Selling, general, and administrative expenses	12,923	12,940	12,619	13,657	52,139
Operating income	1,306	717	410	1,511	3,944
Interest and other income (expense), net	(29)	(67)	(111)	320	113
Income before income taxes	1,277	650	299	1,831	4,057
Provision for income taxes	526	216	259	2,250	3,251

Net income (loss)	$751	$434	$ 40	$(419)	$806
Basic net income (loss) per share	$0.05	$0.03	$ 0.00	$(0.03)	$0.05
Diluted net income (loss) per share	$0.05	$0.03	$ 0.00	$(0.03)	$0.05
Cash dividend declared per share	$—	$—	$ —	$—	$—

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(1) During the 2017 second quarter, the Company incurred $0.8 million in severance charges, which reduced net income by $0.5 million and basic and diluted earnings per share by $0.03. The Company recorded the severance charges in direct costs ($0.4 million) and selling, general, and administrative expenses ($0.4 million).

(2) During the 2017 third quarter, the Company incurred $1.2 million of unexpected costs associated with the Company's self-insured medical plan, which reduced net income by $0.7 million and basic and diluted earnings per share by $0.05.

(3) During the 2017 fourth quarter, the Company incurred a $1.7 million charge due to tax law changes that required the Company to reduce its deferred tax assets. Also included in interest and other income (expense) in the 2017 fourth quarter is a $0.4 million non-taxable life insurance gain for a former executive that passed away in the 2017 fourth quarter.

	Quarters				
	First (4)	Second	Third (4)	Fourth	Total
(amounts in thousands, except per-share data)					
2016					
Revenue	$85,850	$83,486	$78,065	$77,492	$324,893
Direct costs	71,305	67,574	64,193	62,639	265,711
Gross profit	14,545	15,912	13,872	14,853	59,182
Selling, general, and administrative expenses	13,467	14,026	14,567	13,140	55,200
Goodwill impairment charges	21,544	—	15,785	—	37,329
Operating income (loss)	(20,466)	1,886	(16,480)	1,713	(33,347)
Interest and other income (expense), net	(62)	(97)	77	(107)	(189)
Income (loss) before income taxes	(20,528)	1,789	(16,403)	1,606	(33,536)
Provision for income taxes	329	530	(220)	463	1,102
Net income (loss)	$(20,857)	$1,259	$(16,183)	$1,143	$(34,638)
Basic net income (loss) per share	$(1.34)	$0.08	$(1.03)	$0.07	$(2.22)
Diluted net income (loss) per share	$(1.34)	$0.08	$(1.03)	$0.07	$(2.22)
Cash dividend declared per share	$0.06	$0.06	$0.06	$—	$0.18

(4) The Company incurred goodwill impairment charges totaling $37.3 million during the 2016 first and third quarters. These charges reduced basic and diluted earnings per share by $2.39. During the 2016 third quarter, the Company incurred severance charges included in selling, general and administrative expenses of approximately $1.5 million, or $1.0 million net of tax, or $0.06 basic and diluted net income per share, relating to severance for two of the Company's former executives.

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

The Company's management has evaluated, under the supervision and with the participation of the Company's Chief Executive Officer and Chief Financial Officer, the effectiveness of the design and operations of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) as of the end of the period covered by this annual report. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures were effective as of the end of the period covered by this annual report.

(a) Management's Annual Report on Internal Control Over Financial Reporting
The Company's management is responsible for establishing and maintaining an adequate system of internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Further, because of changes in conditions, effectiveness of internal control over financial reporting may deteriorate.

Management of the Company conducted an evaluation of the effectiveness of the Company's internal control over financial reporting based on the Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, the Company's management did not identify any control deficiencies it considered to be material weaknesses under the rules specified by the Public Company Accounting Oversight Board's Auditing Standard No. 5, and therefore concluded that its internal control over financial reporting was effective as of December 31, 2017.

Our independent registered public accounting firm has issued an attestation report on the Company's effectiveness of internal control over financial reporting. Their report appears in Item 9A(b), Attestation Report of the Registered Public Accounting Firm.

(b) Attestation Report of the Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Computer Task Group, Incorporated:

Opinion on Internal Control Over Financial Reporting

We have audited Computer Task Group, Incorporated's and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), cash flows, and shareholders' equity for each of the years in the three-year period ended December 31, 2017, and the related notes and financial statement schedule (collectively, the "consolidated financial statements"), and our report dated March 14, 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 Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit 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

Buffalo, New York

March 14, 2018

(c) Changes in Internal Control Over Financial Reporting

The Company reviews, revises and improves the effectiveness of the Company’s internal controls on a continuous basis. The Company’s management, including its Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the Company’s internal control over financial reporting as of the end of the period covered by this annual report. There were no changes in the Company’s internal control over financial reporting that occurred during the Company's last fiscal quarter, which ended on December 31, 2017, that materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

Item 9B. Other Information

None

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Except as otherwise set forth below, the information required in response to this item is included in this annual report on Form 10-K for the year ended December 31, 2017, except insofar as information with respect to executive officers is presented in Part I, Item 1 of this report pursuant to General Instruction G(3) of Form 10-K. Information regarding the Company's Code of Conduct is incorporated herein by reference to the information set forth under "Available Company Information" in Part I, Item 1 of this annual report on Form 10-K. The Company maintains a separate standing audit committee established in accordance with section 3(a)(58)(A) of the Exchange Act consisting of all independent directors. James R Helvey III is the designated audit committee financial expert.

Arthur W. Crumlish. Mr. Crumlish, 63, was named Chief Executive Officer of the Company and appointed to the Company's Board of Directors in July 2016. Mr. Crumlish has been with the Company since 1990 and most recently served as Senior Vice President and General Manager of Strategic Staffing Solutions (SSS). As the general manager for SSS, Mr. Crumlish oversaw business development, delivery, sales, and recruiting for many of the Company's largest customers. Prior to assuming the general manager role, Mr. Crumlish served as financial controller for the Company's Strategic Staffing Services division, where he was responsible for business plan development, financial reporting and analysis, pricing, contractual compliance, and policy/procedure implementation. Mr. Crumlish was also manager of the general accounting and financial controller of the Company's IBM national team. Mr. Crumlish earned a master of business administration degree from Canisius College in Buffalo, New York, and a Bachelor of Science degree from Niagara University in Niagara Falls, New York.

James R. Helvey III. Mr. Helvey, 59, was appointed to CTG's Board of Directors in November 2015. Mr. Helvey co-founded Cassia Capital Partners, LLC, a registered investment advisor, in 2011 and has served as a managing partner since its formation. From 2005 to 2011, Mr. Helvey was a partner and the Risk Management Officer for CMT Asset Management Limited, a private investment firm. From 2003 to 2004, Mr. Helvey was a candidate for the United States Congress in the 5th District of North Carolina. Mr. Helvey served as Chairman and Chief Executive Officer of Cygnifi Derivatives Services, LLC, an online derivatives services provider, from 2000 to 2002. From 1985 to 2000, Mr. Helvey was employed by J.P. Morgan & Co., serving in a variety of capacities, including as Vice Chairman of J.P. Morgan's Risk Management Committee, Chair of J.P. Morgan's Liquidity Committee, Global Head of Derivative Counterparty Risk Management, head of the swap derivative trading business in Asia and head of short-term interest rate derivatives and foreign exchange forward trading in Europe. Mr. Helvey graduated magna cum laude with honors from Wake Forest University. Mr. Helvey was also a Fulbright Scholar at the University of Cologne in Germany and received a Master's degree in international finance and banking from Columbia University, School of International and Public Affairs, where he was an International Fellow. Mr. Helvey is a director and serves on the Audit Committee of Coca-Cola Bottling Co. Consolidated., a publicly traded and independent bottler of Coca-Cola Company products, Verger Capital Management LLC, Piedmont Federal Savings Bank (Audit Chair), and has also served on the board of trustees of Wake Forest University and the Wake Forest Baptist Medical Center. Mr. Helvey was a director of Pike Corporation, an energy solutions provider, from 2005 to 2014, where he served as Lead Independent Director, Chairman of the Audit Committee and Chairman of the Compensation Committee.

Mr. Helvey's experience in international business and finance, executive management and as a director of other organizations brings a valuable and necessary perspective to the Board and qualifies him to serve as a member of the Board.

David H. Klein. Mr. Klein, 69, has been a Director since September 2012. He is the President of Klein Solutions Group, LLC, which provides advice on policy, strategy, operations and finance to healthcare delivery and payer organizations. Mr. Klein also serves as: a special advisor to the CEO of the University of Rochester (UR) Medical Center, a professor of public health sciences in the UR School of Medicine and Dentistry and as an executive professor of healthcare management in the UR Simon Business School. He also provides pro bono advice on strategy, population health management and partnerships with health plans and corporations. Mr. Klein was most recently the Chief Executive Officer of The Lifetime Healthcare Companies, which was comprised of Excellus BlueCross BlueShield (BCBS), Univera Healthcare, Lifetime Health Medical Group, Lifetime Care (home care agency), EBS-RMSCO Benefit Solutions (benefits consulting firm and third party administration) and MedAmerica (long term care insurance company). Mr. Klein had been a senior executive with The Lifetime Healthcare Companies and its predecessor companies since 1986, serving as CEO from 2003 until 2012. Mr. Klein previously was an executive with the national BlueCross BlueShield Association and Health Care Service Corporation. He served as director of the national Blue Cross Blue Shield Association (BCBSA) and America’s Health Insurance Plans. Mr. Klein currently serves as a director of the following privately held companies: Landmark Health (a Francisco Partners (private equity fund) company which creates and manages home visiting multi-disciplinary medical groups to care for complex, chronically ill patients), Avalon Healthcare Solutions (also a Francisco Partners (private equity fund) company that provides laboratory benefits management solutions), Cogito (an Open View Partner/Romulus Capital/Sales Force Ventures funded customer engagement/voice analytics company), NextHealth Technologies (a Norvest Venture Partners patient engagement optimization company), PNT (a claims and clinical information data acquisition company), Excel Partners Venture Fund (a venture capital fund that invests in high-tech startups focused on Upstate New York) and Orthometrics (a technology enabled musculoskeletal injury risk management company). He is also a director of the University of Rochester private company spinout, PharmAdva (an automated home medication adherence system manufacturer). Mr. Klein is a member of the Cressey & Company private equity fund Distinguished Executives Council. He serves as an advisor to Health Catalyst Capital Management, LLC private equity fund. Mr. Klein serves as non-executive chair of the New York eHealth Collaborative which operates New York State’s health information exchange. Mr. Klein serves as a director of Commonwealth Care Alliance (a health plan that serves high cost high need patients). Mr. Klein is a member of Johns Hopkins University Carey School of Business Health Care Advisory Board. Mr. Klein chaired United Way of Greater Rochester and an American Cancer Society Capital Campaign to establish a new Rochester Hope Lodge. He has also been president of the local Boy Scout Council and director of Northeast Region, Boy Scouts of America. He is a Boy Scouts’ Distinguished Eagle Scout and a recipient of their Silver Beaver and Silver Antelope awards. Mr. Klein received a Bachelor of Science from Rensselaer Polytechnic Institute and his Master of Business Administration from the University of Chicago.

Valerie Rahmani. Valerie Rahmani, 60, was appointed to CTG’s Board of Directors in November 2015. Ms. Rahmani is a non-executive Director and member of the Risk Committee of the London Stock Exchange Group plc. She is a non-executive Director and member of the Audit Committee of RenaissanceRe Holdings Ltd, a Bermuda-based reinsurance company. She is also a Board member of a social media startup, Rungway, based in London, and is the part-time CEO of the Innovation Panel of Standard Life Aberdeen plc, a global investment company based in the UK. From 2010 to 2015, Ms. Rahmani was a member of the Board of Directors of Teradici Corporation - a private technology company where she served on the Audit and Compensation Committees. She most recently served as Chief Executive Officer of Damballa, Inc. from 2009 to 2012. Damballa was a venture capital funded cyber-security company headquartered in Atlanta, Georgia. Prior to her role at Damballa, Ms. Rahmani was with IBM in various managerial capacities for 28 years. Her latest role was General Manager of IBM Internet Security Systems. Other IBM roles included General Manager of the $2.7 billion Global Technology Services businesses, head of Sales and Services Strategy unit, General Manager of IBM’s $3.5 billon UNIX server business, General Manager of IBM’s Mobile business as well as serving as the Executive Assistant to Louis Gerstner, former Chairman and Chief Executive Officer of IBM. Ms. Rahmani holds an MA and a Doctor of Philosophy degree in Chemistry from Oxford University, England.

Daniel J. Sullivan. Mr. Sullivan, 71, has been a Director of CTG since 2002 and was appointed to serve as the non-executive Chairman of the Board of Directors in October 2014. He most recently served as the President and Chief Executive Officer of FedEx Ground from 1998 until 2007. FedEx Ground is a wholly owned subsidiary of FedEx Corporation. From 1996 to 1998, Mr. Sullivan was the Chairman, President and Chief Executive Officer of Caliber System. In 1995, Mr. Sullivan was the Chairman, President and Chief Executive Officer of Roadway Services. Mr. Sullivan is currently a member of the Board of Directors of Schneider National, Inc. (Green Bay, Wisconsin), where he serves as non-executive Chairman of the Board of Directors. Mr. Sullivan is also a current member of the Board of Directors of The Medical University of South Carolina Foundation where he serves as Vice Chairman of the Board of Directors. Mr. Sullivan previously served as a member of the Board of Directors of Pike Electric, Inc. from 2007 to 2014 (Pike Electric was sold in December 2014 to Court Square Capital Partners), GDS Express (Akron, Ohio) from 2004 to 2009; and Gevity, Inc. (Bradenton, Florida) from 2008 to 2009. He is a former federal commissioner for the Flight 93 National Memorial project in Somerset County, Pennsylvania.

Owen J. Sullivan. Mr. Sullivan, 60, was appointed to the Board of Directors in February 2017. Mr. Sullivan is a former Operating Partner for Baird Capital, a venture capital, growth equity and private equity investment firm where he worked with its Technology and Services Team. He has over thirty years of executive-level experience in the staffing solutions and professional resourcing industry, culminating in his service as President of ManpowerGroup’s Specialty Brands business, which he joined in 2003 and served in a variety of executive positions, including as Chief Executive Officer of Right Management and Jefferson Wells until his retirement in 2013. He previously served from 1993 to 2001 as president of the financial services group at Metavante in Brown Deer, a financial technology firm since acquired by Fidelity National Information Services Inc., better known as FIS. Mr. Sullivan holds a bachelor's degree from Marquette University, where he serves as Chairman of the board of trustees. He is also on the boards of the Medical College of Wisconsin, Johnson Financial Group. He also served on the board of Journal Communications, Ministry Health Care and Children’s Hospital of Wisconsin. Mr. Sullivan is unrelated to Daniel J. Sullivan, Chairman of the Board.

Executive Officers of the Company

As of December 31, 2017, the following individuals were executive officers of the Company:

Name	Age	Office	Period During Which Served as Executive Officer	Other Positions and Offices with Registrant
Arthur V. Crumlish	63	President and Chief Executive Officer	July 21, 2016 to date	Director
		Senior Vice President	September 24, 2001 to July 20, 2016	
John M. Laubacker	51	Senior Vice President, Chief Financial Officer	April 21, 2017 to date	Treasurer
		Interim Chief Financial Officer	Oct. 15, 2014 to April 5, 2015	
Filip J. L. Gydé	57	Senior Vice President	April 6, 2015 to date	None
		Interim Executive Vice President of Operations	Oct. 15, 2014 to April 5, 2015	
		Senior Vice President	Oct. 1, 2000 to Oct. 14, 2014	
Peter P. Radetich	63	Senior Vice President, General Counsel	April 28, 1999 to date	Secretary
Jeffrey D. Gerkin	51	Executive Vice President, Sales	December 11, 2017 to date	None

Mr. Crumlish was promoted to President and Chief Executive Officer on July 21, 2016. Previously, Mr. Crumlish was Senior Vice President since September 24, 2001 of the Company's IT and Other Staffing Services organization. Prior to that, Mr. Crumlish was the Financial Controller of the Company's IT and Other Staffing Services organization. Mr. Crumlish joined the Company in 1990.

Mr. Laubacker was promoted to Senior Vice President and Chief Financial Officer on April 21, 2017. Previously, Mr. Laubacker was promoted to Vice President in February 2017 and has served as Treasurer since 2006. Prior to that, Mr. Laubacker was the Director of Audit and Treasury Services and the Manager of External Reporting. Mr. Laubacker joined the Company in 1996.

Mr. Gydé currently serves as the Senior Vice President and General Manager for the Company's European operations. Mr. Gydé was Interim Executive Vice President of Operations from October 15, 2014 until April 5, 2015, responsible for operating activities of the overall Company. Previously he was Senior Vice President and General Manager of CTG Europe from October 1, 2000 through October 14, 2014. Prior to that, Mr. Gydé was Managing Director of the Company's operations in Belgium. Mr. Gydé has been with the Company since May 1987.

Mr. Radetich joined the Company in June 1988 as Associate General Counsel, and was promoted to General Counsel and Secretary in April 1999.

Mr. Gerkin currently serves as the Executive Vice President of Sales and joined the Company in December 2017. Prior to joining CTG, Mr. Gerkin served as the Senior Vice President, North American Sales for ManpowerGroup from January 2015 until December 2017. He has also held sales and marketing leadership roles as Senior Vice President and General Manager for Right Management from November 2011 until January 2015 and Vice President of Metro Marketing and Director of Marketing, both for Manpower, Inc. from December 2009 until November 2011. He also served as a Client Sales Director for Accenture Information Management Services and has also held sales and strategic alliance leadership positions at Cognos, Adaytum Software, and Lawson.

Item 11. Executive Compensation

COMPENSATION DISCUSSION AND ANALYSIS

Compensation Committee Composition and Primary Purposes

The Compensation Committee of the Board of Directors consists of Valerie Rahmani, Chair, James R. Helvey III, David H. Klein, Daniel J. Sullivan, and Owen J. Sullivan. The Compensation Committee is responsible for overseeing the administration of the Company's employee stock and benefit plans, establishing policies relating to the compensation of employees and setting the terms and conditions of employment for executive officers. During 2017, the Compensation Committee held a total of six meetings. The Board of Directors has determined that the members of the Compensation Committee are independent.

The Compensation Committee has a charter that is available on our Company's website as described above under "Available Company Information" in Part I, Item 1 of this annual report on Form 10-K. The Compensation Committee reviews the charter annually and updates the charter as necessary.

The primary purposes of the Compensation Committee are to:

(1) review and approve corporate goals and objectives relevant to the Company's compensation philosophy,
(2) evaluate the CEO's performance and determine the CEO's compensation in light of those goals and objectives,
(3) review and approve executive officer compensation, incentive compensation plans and equity-based plans, and
(4) produce an annual report on executive compensation, and approve the Compensation Discussion and Analysis, for inclusion in the Company's annual proxy statement or this annual report on Form 10-K for the year ended December 31, 2017.

Effect of Say-on-Pay Vote

At the May 2017 annual meeting, shareholders were asked to approve the Company's fiscal 2016 executive compensation programs. Of those who voted, over 78% voted to approve the proposal. In light of these results, and in consideration of shareholder input obtained from outreach efforts taken in connection with the 2017 meeting, the Compensation Committee carefully reviewed the Company's executive compensation practices. The Committee concluded that the Company's existing executive compensation programs continue to be the most appropriate for the Company and effective in rewarding executives commensurate with business results. The Committee believes that the best way to align the CEO's compensation with shareholder interests is to place the majority of his compensation at-risk in the form of long-term performance based equity awards and annual incentive opportunity.

Compensation Philosophy and Executive Compensation Objectives

Given the exceptionally competitive nature of the IT Industry, the Compensation Committee and management believe it is strategically critical to attract, retain and motivate the most talented employees possible by providing competitive total compensation packages. This general philosophy on compensation applies to all employees of the Company. With regard to executive officer compensation, the Company seeks to accomplish the following high-level objectives:

- Offer a Competitive Total Compensation Package. To attract the most talented executive officers possible, the Company should tailor each executive officer's total compensation plan to reflect average total compensation offered at similar organizations. This is accomplished by means of routine compensation surveying, the process for which is described further below.

- Tie Total Compensation to Performance in a Meaningful Manner. To promote the Company's overall annual and long-term financial and operating objectives, a significant portion of total compensation should be based upon the accomplishment of specific Company objectives within an executive officer's purview. This is accomplished by means of various performance-based incentive plans described further below.

- Encourage Executives to Think Like Shareholders. To promote the best interests of shareholders, executive officers should be encouraged to maintain a significant equity interest in the Company. This is accomplished by means of various equity award plans described further below.

How Executive Compensation is Determined

In order to promote the Company's objective of tying total compensation to performance in a meaningful manner, the Company has adopted a uniform approach to compensation planning. In short, once the Board of Directors has reviewed and approved the corporate goals and objectives for the entire Company, the Compensation Committee begins the process of setting compensation for the executive officers. Once compensation has been set for the executive officers, they in turn are able to set performance-based objectives for their direct reports. This approach to compensation planning continues throughout the organization. In this manner, the compensation planning process seeks to optimize shareholder value by integrating appropriate employee responsibilities with corporate objectives.

In an effort to accomplish the Company's objective of offering competitive total compensation packages, the Compensation Committee routinely surveys total compensation packages for all executive officers. In 2017, as has been the practice for several years, the Compensation Committee retained the services of Pay Governance LLC ("Pay Governance"), a highly regarded independent compensation consulting firm, to undertake an annual compensation review for each of the Company's executive officers. Pay Governance reports to, and acts solely at the direction of, the Compensation Committee. Pay Governance does not provide any other services to the Company or any of the Company's executive officers individually, aside from those services provided to the Compensation Committee. Pay Governance has provided the Committee with appropriate assurances and confirmation of its independent status. Furthermore, the Committee has considered the factors set forth in 17 C.F.R. §240.10C-1(b) (4) (i)-(vi) and believes that Pay Governance has been independent throughout its services to the Committee. Prior to conducting the study, Pay Governance was provided with job descriptions for each of the executive officers and was specifically instructed to provide the Compensation Committee with a Competitive Market Analysis, a written report for each executive officer reflecting the competitive range of total compensation for comparable positions.

Surveying Methodology Used. Pay Governance used a Towers Watson executive compensation database to create the report. This database contains compensation data from approximately 400 companies. From this data, Pay Governance performed regression analyses designed to identify a competitive range for jobs in similar companies by revenue size, and in similar business units or with similar position-specific revenue responsibilities. Pay Governance's competitive range is based solely on external competitive data and does not take individual performance or internal pay equity into account. The competitive range identified in the Pay Governance report approximates the statistical mean within one standard deviation. As such, the competitive range tends to fall within approximately fifteen percent (15%) of either side of the median. Deviation within this range is usually explained by differences in experience, length of service and/or differences in responsibilities.

For 2017, the Pay Governance report observed that total compensation for all named executive officers, except Mr. Crumlish, was within the competitive range. The total compensation for Mr. Crumlish was within the competitive range prior to his promotion to CEO in July 2016. Subsequent to his promotion, Mr. Crumlish's adjusted compensation fell below the competitive range for that position. The Compensation Committee increased Mr. Crumlish's total compensation to the competitive range in 2017.

To further assess the Company's overall compensation practices versus the market, Pay Governance collected pay data for the CFO position from the most recent proxy statements for five peer companies selected by the Compensation Committee.[1] Pay Governance selected only the CFO position because all companies are required to report data on this position, and the duties are generally comparable. The results of this comparison indicated that the compensation level for the CFO fell between the 25th and 50th percentiles of the peer companies.

Upon completion of the report, the Compensation Committee met personally with a representative of Pay Governance to review the document. The Compensation Committee used a separate Pay Governance study, in conjunction with the Company's overall long-term financial and operating objectives for 2017, to set total compensation for the Company's current CEO. The Company's CEO did not have a direct role in establishing the terms of his compensation. The details of CEO total compensation for 2017 are discussed below.

The CEO used the Pay Governance Competitive Market Analysis, in conjunction with the Company's overall long-term financial and operating objectives for 2017, to make compensation recommendations to the Board for each executive officer. It has been the practice of the Board to approve total compensation packages that contain a significant portion of tailored, performance-based incentives within the executive officer's purview. The executive officers have no direct role in establishing the terms of their compensation. The details of each named executive officer's total compensation for 2017 are discussed below.

Components of Executive Compensation

The compensation paid to the Company’s executive officers, as reflected in the tables set forth in this annual report on Form 10-K for the year ended December 31. 2017, can be broken down into the following three general categories: (i) Baseline Compensation, (ii) Performance-Based Incentives, and (iii) Equity-Based Incentives.

Baseline Compensation

Baseline Compensation includes annual base salary, standard employee benefits available to all employees generally and participation in certain executive-level employee benefit programs. Once awarded, compensation payments made under this component are provided during the course of the year without regard to achievement of specific performance-based objectives. The Company chooses to pay this component of compensation because it

[1] The five companies selected were: (i) CIBER, Inc., (ii) Mastech Holdings, Inc., (iii) NCI Inc., (iv) Perficient Inc. and (v) Service Source International.

comprises the foundation of executive compensation. As such, the Company considers maintaining competitive levels of baseline compensation essential to attracting and retaining talented personnel.

Annual Base Salary —In an effort to stay competitive, annual salaries for executive officers are reviewed by the Compensation Committee on a yearly basis. With respect to determining the base salary of executive officers, the Committee takes into consideration the compensation report prepared by Pay Governance, the executive's individual performance as well as internal equity considerations. Of these factors, the Pay Governance report is generally given the most weight. In addition, if circumstances warrant, such as a change in role or responsibility, the Compensation Committee may grant discretionary bonuses from time to time to executive officers. The Compensation Committee granted no discretionary bonuses in 2017.

Standard Employee Benefits —Executive officers are entitled to participate in the same benefit programs afforded generally to all other employees of the Company. Such benefits generally include a 401(k) program, Medical/Dental/Vision Health Plans, Employee Stock Purchase Plan, Short-Term and Long-Term Disability Plans and a Flexible Spending Account Plan.

Executive-Level Benefits —In addition to the benefits afforded to employees generally, executive officers are also eligible to participate in or receive the benefit of the following Company sponsored Executive-Level Benefits: Long-Term Executive Disability Plan, Executive Life Insurance Plan, Accidental Death & Dismemberment and Travel Accident Plan, Income Tax Preparation and Advice program and the Company's change in control agreements.[2] A synopsis of these executive-level benefits is provided below:

- Long-Term Executive Disability Plan. The Company will pay, on the executive's behalf, the premiums associated with maintaining a long-term disability policy with approximately seventy percent (70%) salary replacement up to $29,000 per month. The benefits provided under the Long-Term Executive Disability Plan are provided in lieu of the Long-Term Disability Plan afforded to employees generally.

- Executive Life Insurance Plan. The Company will pay, on the executive's behalf, the premiums associated with maintaining a life insurance policy with coverage equal to three times current annual base salary.

- Accidental Death & Dismemberment & Travel Accident Plan. The Company will pay, on the executive's behalf, the premiums associated with maintaining an accidental death and dismemberment policy with coverage equal to four times current annual base salary.

- Income Tax Preparation and Advice Program. The Company will generally reimburse executives for out-of-pocket fees expended, up to $2,000,[3] on tax preparation, planning or advice.

- Change in Control Agreements. All executive officers' change in control agreements contain double trigger mechanisms. Pursuant to the terms of these agreements, executives are generally entitled to the following benefits in the event of a change in control (as defined in the agreements): (a) immediate vesting of all stock-related awards granted under the 2010 Equity Award Plan, the 2000 Equity Award Plan, or the 1991 Restricted Stock Plan; (b) immediate vesting and cash payout of any deferred compensation accruing pursuant to the Company's Nonqualified Key Employee Deferred Compensation Plan; and (c) to the extent that the executive's stock option rights are impeded or adversely affected by the resulting change in control (i.e., no comparable conversion options offered), an executive is entitled to an immediate lump sum payout of the built-in gain on all unexercised stock options, calculated as of the date of the change in control. Further, additional severance benefits apply in the event the executive's employment is terminated for Good Reason by the executive or without Cause by the Company within six (6) months before or twenty-four (24) months after the date of change in control. These additional severance benefits include: a lump sum payment of two times the executive's annual rate of salary, a lump sum payment of two times the executive's average annual Incentive (calculated from the preceding three years), a lump sum payout (in lieu of continued healthcare coverage) equal to twenty-five percent (25%) of current salary and highest annual Incentive (from the preceding three years), indemnification coverage for a period of sixty (60) months, a cash-out of equity-based compensation; and payout of any and all deferred compensation accruing up to the date of termination. For more information on Potential change in control related payments, see "Potential Payments upon Termination or Change in Control."

[2] Since Belgian law designates the calculation of separation benefits, Mr. Gydé does not have a change in control agreement.

[3] European executives receive up to 2,000 Euros.

Performance-Based Incentives

Performance-Based Incentives include an annual cash incentive (“Incentive”). Compensation payments provided under this program are conditional upon the accomplishment of specific performance-based goals. The Company chooses to pay this component of compensation because it believes this compensation program is critical to motivating executive officers in a manner that directly impacts shareholder value.

Annual Cash Incentive Compensation —Each executive officer’s total annual compensation includes a potential Incentive award. Incentive payments are contingent upon the accomplishment of certain performance-based objectives selected by the Compensation Committee annually. In selecting objectives, the Compensation Committee seeks to individually tailor performance criteria for each executive officer. The amounts of the Incentive, and the formula for calculating actual payments, are regularly reviewed and surveyed in conjunction with the Pay Governance study discussed earlier. In 2017, the Compensation Committee established performance objectives for the executive officers based on targeted levels of revenue and operating income. To the extent an executive officer has specific operational responsibilities, performance objectives were split between: (i) consolidated revenue and operating income for the entire Company and (ii) business unit revenue and gross profit for that executive officer’s focus of operation. Targets for non-operational executive officers, including the CEO, were based solely on consolidated revenue and operating income for the entire Company. In 2017, the planned consolidated revenue and consolidated operating income targets for all executive officer incentive plans were $341,100,000 and $6,080,000, respectively.

The formula for calculating each executive officer’s Incentive provides that at least eighty percent (80%) of the stipulated plan target (“Threshold”) must be achieved before any remuneration is awarded for that objective. If the Threshold is achieved, the executive officer receives fifty percent (50%) of the designated plan award for that objective. Then, for each additional percentage point (1%) achieved above the Threshold, up to one hundred percent (100%) of the plan target (“Objective Goal”), the executive officer receives another two and one-half percent (2.5%) of the designated plan award for that objective. For each additional percentage point (1%) achieved above the Objective Goal, the executive officer receives another five percent (5%) of the designated plan award for that objective. Each plan prohibits the receipt of amounts in excess of two hundred percent (200%) of the designated plan award for that objective.

The plan award is generally calculated as a percentage of annual base salary. In 2017, the plan awards were: (i) for Mr. Crumlish, CEO, approximately one hundred seven (107%) of base salary actually paid, (ii) for Mr. Harrington, former CFO, approximately ninety-five percent (95%) of base salary actually paid, (iii) for Mr. Laubacker, CFO, approximately seventy-three (73%) of base salary actually paid[4], (iv) for Mr. Gydé, SVP, fifty-one percent (51%) of base salary actually paid[5], and (v) for Mr. Radetich, SVP, approximately seventy-two percent (72%) of base salary actually paid.

The Compensation Committee believes that each executive officer’s Incentive plan targets for 2017 involved a reasonably challenging degree of difficulty that considers current economic challenges and reflects the Board’s desire to maintain flexibility in enhancing the executive officer’s focus, motivation and enthusiasm. In exceptional circumstances, the Compensation Committee exercises discretion to award Incentive compensation absent achievement of the specified thresholds or to reduce or increase the size of any award or payout. In this manner, the Compensation Committee believes that each executive officer’s Incentive plan targets are reasonably tailored to promote the Company’s overall annual and long-term financial goals.

Deferred Compensation —This component of executive compensation consists of contributions made under the Deferred Compensation Plan by those executives that choose to defer all or a part of their compensation under plan. Executives chosen to participate in the plan are eligible to elect to defer a percentage of their annual cash compensation. Effective as of January 1, 2017 the Company has elected to stop making Company contributions under the plan.

Equity-Based Incentives

This component of executive compensation consists of grants of restricted stock and stock options under the Company's 2010 Equity Award Plan and the 1991 Restricted Stock Plan[6]. In making such grants, the Compensation Committee considers an executive's past contributions and expected future contributions towards Company performance. Grants are made to key employees of the Company who, in the opinion of the Compensation Committee, have had and are expected to continue to have a significant impact on the long-term performance of the Company. The awards are designed to reward individuals who remain with the Company and to further align employee interests with those of the Company's shareholders. The Company chooses to pay this component of compensation because it believes that stock

[4] Upon Mr. Laubacker's promotion to CFO in April 2017, his annual base salary was increased to $280,000 and his incentive was increased to $210,000.

[5] Mr. Gyde's base salary is $279,000.

[6] The 2010 Equity Award Plan was adopted by the Shareholders in 2010. As of the date of this filing, grants made prior to the adoption of the 2010 Equity Award Plan are still outstanding and, as such, are governed by the terms of predecessor Award Plans.

ownership by management is beneficial in aligning management's activities and decisions with shareholders' interests of maximizing share value.

Except in circumstances of new or recently promoted executive officers, the Compensation Committee generally grants equity compensation on a set date each year. The Company does not time or plan the release of material non-public information for the purpose of affecting the value of compensation. Equity awards may also be granted at other meetings of the Compensation Committee to individuals who become executive officers, are given increased responsibilities during the year or in recognition of special accomplishments. The Company has adopted stock ownership guidelines for senior executive officers requiring: (i) the CEO to own Company shares valued at five (5) times his or her own base salary, and (ii) the CFO, and Senior Vice Presidents with oversight of operating segments, to own Company shares valued at three (3) times his or her own base salary.

Restricted Stock Grants During 2017 —The Compensation Committee granted restricted stock awards under the 2010 Equity Award Plan to various executive officers as identified in the tables below. In general, recipients of restricted stock awards receive a specified number of non-transferable restricted shares to be held by the Company, in the name of the grantee, until satisfaction of stipulated vesting requirements. Upon satisfaction of such vesting requirements, restrictions prohibiting transferability will be removed from the vested shares. In determining whether to grant an individual restricted stock, the Compensation Committee considers an executive's contribution toward Company performance, expected future contribution and the number of options and shares of common stock presently held by the executive. For awards of restricted stock granted in 2017 to executive officers, shares vest over a three-year period as follows: (i) 50% of the amount of an award will vest only if the thirty-trading-day average closing price of the Company's common stock equals or exceeds a 50% increase in its stock price in the three-year period from the date of grant, and (ii) the remaining 50% of the amount of an award will vest only if the thirty-trading-day average closing price of the Company's common stock equals or exceeds a 100% increase in its stock price in the three-year period from the date of grant.

Stock Options Granted During 2017 —The Compensation Committee granted stock options under the Company's 2010 Equity Award Plan to Mr. Laubacker upon his promotion to CFO. In general, recipients of the stock options receive the right to purchase shares of common stock of the Company in the future at a price equal to the value of the Company's common stock, as reported on NASDAQ, at closing on the date of grant. The Compensation Committee determines the dates and terms upon which options may be exercised, as well as whether the options will be incentive stock options or nonqualified stock options. For awards of stock options granted in 2017 to Mr. Laubacker, options vest in four equal installments over the next four years, beginning on the first anniversary of the date of grant. All stock options have a term of ten years from the date of grant. In determining whether to grant an individual stock options, the Compensation Committee considers an executive's contribution toward Company performance, expected future contribution and the number of options and shares of common stock presently held by the executive. Any value that might be received from an equity grant depends upon increases in the price of the Company's common stock. Accordingly, the amount of compensation to be received by an executive is directly aligned with increases in shareholder value.

Compensation Committee Report

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to the Board that the Compensation Discussion and Analysis be included in this annual report on Form 10-K for the year ended December 31, 2017.

Submitted by the Compensation Committee

Valerie Rahmani, Chairman

James R. Helvey III

David H. Klein

Daniel J. Sullivan

Owen J. Sullivan

Compensation Committee Interlocks and Insider Participation

During the last completed fiscal year, the Compensation Committee was comprised entirely of independent directors. The Compensation Committee of the Board of Directors is composed of Valerie Rahmani, Chair, James R.

Helvey III, David H. Klein, Daniel J. Sullivan, and Owen J. Sullivan. William D. McGuire served as Chairman of the Compensation Committee until his retirement in February 2017.

2017 SUMMARY COMPENSATION TABLE

Name and Principal Position (a)	Year (b)	Salary (c) ($)	Stock Awards (e) ($) (1)	Option Awards (f) ($) (2)	Non-Equity Incentive Plan Compensation (g) ($)		All Other Compensation (i) ($) (5)		Total (j) ($)
Arthur W. Crumlish President and CEO (July 2016 to present)	2017	$410,000	$91,977	$-	$ 155,680 $ -	(3) (4)	$ 19,121	(9)	$676,778
SVP and GM, Strategic Staffing Solutions	2016	$314,293	$210,402	$173,908	$ 124,963 $ 21,963	(3) (4)	$ 36,880	(9)	$882,409
	2015	$277,000	$97,988	$31,425	$ 128,149 $ 30,386	(3) (4)	$ 28,504	(9)	$593,452
John M. Laubacker SVP, CFO and Treasurer (April - December 2017)	2017	$260,411	$66,866	$45,991	$ 67,069 $ -	(3) (4)	$ 22,543	(6)	$462,880
Brendan M. Harrington Former SVP & CFO (January 2017 - April 2017)	2017	$116,752	$-	$-	$ - $ -	(3) (4)	$ 312,851	(7)	$429,603
	2016	$314,000	$175,956	$-	$ 32,962 $ 17,348	(3) (4)	$ 42,897	(7)	$583,163
	2015	$336,384	$133,144	$42,912	$ 230,048 $ 42,482	(3) (4)	$ 45,281	(7)	$830,251
Filip J.L. Gydé SVP and GM, CTG Europe	2017	$271,891	$28,715	$-	$ 279,667 $ -	(3) (4)	$ 107,855	(8)	$688,128
	2016	$258,129	$128,420	$-	$ 120,916 $ -	(3) (4)	$ 124,419	(8)	$631,884
	2015	$274,559	$97,988	$30,456	$ 137,579 $ -	(3) (4)	$ 120,289	(8)	$660,871
Peter P. Radetich SVP and General Counsel	2017	$283,000	$29,167	$-	$ 71,878 $ -	(3) (4)	$ 34,359	(10)	$418,404
	2016	$278,000	$129,366	$-	$ 21,977 $ 14,999	(3) (4)	$ 43,573	(10)	$487,915
	2015	$278,000	$97,988	$31,425	$ 115,179 $ 29,488	(3) (4)	$ 38,321	(10)	$590,401

(1) The amounts in column (e) reflect the aggregate grant date fair value for the awards granted in the fiscal years ended December 31, 2017, 2016, and 2015 as applicable, as computed in accordance with FASB ASC Topic 718. The assumptions used in the calculation of these amounts are included in footnote 10 to the Company's audited financial statements for the fiscal year ended December 31, 2017 included in Item 8, "Financial Statements and Supplementary Data."

(2) The amounts in column (f) reflect the aggregate grant date fair value for the options granted in the fiscal years ended December 31, 2017, 2016, and 2015 as applicable, as computed in accordance with FASB ASC Topic 718. The assumptions used in the calculation of these amounts are included in footnote 10 to the Company's audited financial statements for the fiscal year ended December 31, 2017 included in Item 8, "Financial Statements and Supplementary Data."

(3) Represents cash payments earned under the respective executive's annual cash incentive plan, and additional incentives for Messrs. Harrington, and Gydé of $40,000 and $30,000, respectively in 2015, for their promotion into interim executive roles from October 2014 to April 2015.

(4) Represents amounts contributed by the Company under the Computer Task Group, Incorporated Nonqualified Deferred Compensation Plan in 2016 and 2015. Contributions to this plan were eliminated in 2017.

(5) Life Insurance. During 2017, 2016, and 2015, the Company provided life insurance benefits for Messrs. Crumlish, Laubacker and Radetich. The premiums paid by the Company in 2017 for this benefit included $0, $11,759, and $20,000, respectively. The premiums paid by the Company for this benefit in 2016 for Messrs. Crumlish and Radetich totaled $0 and $20,000, respectively. The premiums paid for this benefit in 2015 for Messrs. Crumlish and Radetich totaled $0 and $18,072, respectively.

401(k) Contributions. The Company may match up to 3% of the contributions made by Messrs. Crumlish, Laubacker and Radetich to the Computer Task Group, Incorporated 401(k) Retirement Plan. There were no contributions made by the Company to the executives in 2017. Contributions made by the Company during 2016 for Messrs. Crumlish and Radetich totaled $7,950 and $0, respectively. Contributions made by the Company in 2015 for Messrs. Crumlish and Radetich totaled $7,950 and $0, respectively.

(6) In addition to life insurance premiums (as further disclosed in footnote 5), during 2017, Mr. Laubacker received a total value of $22,543 in Other Compensation for the following Executive-Level Benefits (which are further described beginning on page 71): Long-Term Executive Disability Plan, Accidental Death & Dismemberment & Travel Accident Plan, and the Executive Medical and Dental Plan.

(7) During 2017, Mr. Harrington received a total value of $312,851 in benefits, including $308,490 in termination benefits, and $4,361 for other Executive-Level Benefits (which are further described beginning on page 71) including: Long-Term Disability Plan and the Executive Medical and Dental Plan. In 2016, Mr. Harrington received a total value of $23,219 from the following Executive-Level Benefits: Long-Term Executive Disability Plan, Accidental Death & Dismemberment & Travel Accident Plan, Executive Medical and Dental Plan Program, and Mr. Harrington's annual dues at a luncheon club. Mr. Harrington received a total value of $26,680 from these

Executive-Level Benefits during 2015.

70

(8) In accordance with Belgian law the Company is required to pay Mr. Gydé: (i) 92% of one month’s pay as vacation pay and (ii) a year-end premium equal to one month’s base salary. Together, these legal obligations totaled $56,673 in 2017, $72,896 in

(9) 2016, and $68,317 in 2015. The Company also makes contributions towards Mr. Gydé’s cafeteria plan account, which is

(10) a plan generally available to all Belgium employees. Contributions to Mr. Gydé’s cafeteria plan totaled $34,794 in 2017, $33,260 in 2016, and $34,878 in 2015. The Company also leases an automobile for Mr. Gydé’s use, as is done for all Belgium employees with a likelihood of traveling. The cost to the Company for leasing Mr. Gydé’s automobile was $16,388 in

2017, $16,050 in 2016, and $16,099 in 2015. Mr. Gydé also received $0, $2,213 and $995 for the Income Tax Preparation and Advice Program in 2017, 2016, and 2015, respectively. Mr. Gydé is paid in Euros and amounts are converted to United States Dollars based on the average foreign currency exchange rate for 2017.

In addition to life insurance premiums and 401(k) contributions (as further disclosed in footnote 5), during 2017 Mr. Crumlish received a total value of $19,121 for the following executive-level benefits (which are further described beginning on page 71): Long-Term Executive Disability Plan, Accidental Death & Dismemberment & Travel Accident Plan, the Executive Medical and Dental Plan, and the Income Tax Preparation and Advice Program. In 2016 and 2015, Mr. Crumlish received a total value of $28,930 and $20,554 for these benefits, respectively.

In addition to life insurance premiums (as further disclosed in footnote 5), during 2017 Mr. Radetich received a total value of $34,359 for the following executive-level benefits (which are further described beginning on page 71): Long-Term Executive Disability Plan, Accidental Death & Dismemberment & Travel Accident Plan, the Executive Medical and Dental Plan, and the Income Tax Preparation and Advice Program. During 2016 and 2015, Mr. Radetich received a total value of

$24,026 and
$20,249 from
these Executive
Level Benefits,
respectively.

Specific Executive Officer Compensation Plans and Employment Agreements

Arthur W. Crumlish, CEO. In 2017, Mr. Crumlish's total compensation included annual base salary payments of $410,000, an Incentive of $155,680, and a grant of 71,300 restricted shares with a performance condition. In setting baseline compensation and the performance standards for Mr. Crumlish's compensation, the Compensation Committee considered the Pay Governance report. The total amount of compensation that Mr. Crumlish received was based on a combination of his baseline compensation and the extent to which the thresholds for compensation were achieved under his performance based incentives.

Mr. Crumlish is currently the only executive officer with a written Employment Agreement ("Agreement") addressing compensation terms. This Agreement provides that:

- compensation would be reviewed and adjusted annually by the Compensation Committee as appropriate;
- either party may terminate the employment relationship upon sixty (60) days prior written notice to the other;
- competitive activities, and other activities adverse to the Company's interests, are prohibited during the term of the employment relationship and for a six-(6) month period after any termination thereof.

The Agreement also provides severance compensation in the event of termination. In the event of termination by Mr. Crumlish for Good Reason (as defined in the Agreement), or by the Company other than for Cause (as defined in the Agreement), or if he dies or becomes disabled, Mr. Crumlish would receive a lump-sum cash payment equal to his current base salary plus the average annual cash Incentive paid to him in the three (3) years leading up to the actual date of termination. Mr. Crumlish would also continue to receive medical and dental benefits for a period of twelve (12) months.

John M. Laubacker, CFO. In 2017, Mr. Laubacker's total compensation included annual salary payments of $260,411, an Incentive of $67,069, a grant of 24,900 stock options at $5.75 per share, a grant of 8,000 restricted shares, and a grant of 16,175 restricted shares with a performance condition. In setting baseline compensation and the performance standards for Mr. Laubacker's compensation, the Compensation Committee considered the Pay Governance report. The total amount of compensation that Mr. Laubacker received was based on a combination of his baseline compensation and the extent to which the thresholds for compensation were achieved under his performance based incentives.

Brendan M. Harrington, Former CFO. In 2017, Mr. Harrington's compensation included annual salary payments totaling $116,752, and termination payments totaling $308,490.

Filip J.L. Gydé, SVP. In 2017, Mr. Gydé's compensation included annual base salary payments of $271,891[7], an Incentive of $236,159, and a grant of 22,260 restricted shares with a performance condition. In setting baseline compensation and the performance standards for Mr. Gydé, the Compensation Committee considered the Pay Governance report. The total amount of compensation that Mr. Gydé received was based on a combination of his baseline compensation and the extent to which the thresholds for compensation were achieved under his performance based incentives. Pursuant to Belgian law, the Company is required to pay Mr. Gydé certain additional benefits that are generally afforded to all Belgian employees. These statutory benefits totaled $100,181 (“2017 Summary Compensation Table”) in 2017.

Peter P. Radetich, SVP. In 2017, Mr. Radetich’s compensation included annual base salary payments of $283,000, an Incentive of $71,878, and a grant of 22,610 restricted shares with a performance condition. In setting

[5] In accordance with Belgian law, the Company is required to pay Mr. Gydé: (i) 92% of one month’s pay as vacation pay and (ii) a year-end premium equal to one month’s pay. These amounts are not reflected in Mr. Gydé’s salary.

baseline compensation and the performance standards for Mr. Radetich's compensation, the Compensation Committee considered the Pay Governance report and his past performance. The total amount of compensation that Mr. Radetich received was based on a combination of his baseline compensation and the extent to which the thresholds for compensation were achieved under his performance-based incentives.

We believe executive pay must be internally consistent and equitable to motivate our employees to create shareholder value. We are committed to internal pay equity, and the Compensation Committee monitors the relationship between the pay our executive officers receive and the pay our non-managerial employees receive. The compensation for our CEO in 2017 was approximately 15 times the median pay of our employees.

Our CEO to median employee pay ratio is calculated in accordance with the SEC's rules and regulations under item 402(u) of Regulation S-K. We identified the median employee by examining the 2017 total cash compensation for all individuals, excluding our CEO, who were actively employed by us on December 31, 2017, the last day of our fiscal year. We included full-time, part-time, and seasonal employees. For employees that were not located in the US, we converted their total cash compensation from local currencies to US dollars by using the 2017 average currency exchange rates per www.irs.gov (https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates). We did not make any other assumptions, adjustments, or estimates with respect to the total cash compensation, and we did not annualize the compensation for any employees that were not employed by us for all of 2017. We believe the use of total cash compensation for all employees is a consistently applied compensation measure because we do not widely distribute annual equity awards to employees.

After identifying the median employee based on total cash compensation, we calculated the annual total compensation for such employee using the same methodology we use for our named executive officers as set forth in the 2017 Summary Compensation Table in our Proxy Statement.

As illustrated in the table below, our 2017 CEO to median employee pay ratio is 15:1:

	Arthur W. Crumlish, President and CEO	Median CTG Employee
Salary	$ 410,000	$ 39,530
Overtime Pay	$ -	$ 2,957
Stock Awards	$ 91,977	$ -
Non-Equity Incentive	$ 155,680	$ 1,522
All Other Compensation	$ 19,121	$ -
	$ 676,778	$ 44,009
Ratio	15.38	1.00

2017 GRANTS OF PLAN-BASED AWARDS

Estimated Future Payouts

		Under Non-Equity Incentive Plan Awards (1)			Estimated Future Payouts Under Equity Incentive Plan Awards						
Name (a)	Date (b)	Threshold (c) ($)	Target (d) ($)	Maximum (e) ($)	Threshold (f) #	Target (g) #	Maximum (h) #	All Other Stock Awards: Number of Shares of Stock or Units (i) #	All Other Option Awards: Number of Securities Underlying Options (j) #	Exercise or Base Price of Option Awards (k) ($/sh)	Grant Date Fair Value of Stock and Option Awards (l) ($)
Arthur W. Crumlish	5/15/2017	$110,000	$440,000	$880,000	-	-	-	71,300	-	$ -	$91,977
John M. Laubacker	5/15/2017	$47,390	$189,558	$379,116	-	-	-	8,000	24,900	$ 5.75	$91,991
John M. Laubacker	5/15/2017	$-	$-	$-	-	-	-	16,175	-	$ -	$20,866
Filip J. L. Gydé	5/15/2017	$40,204	$160,816	$321,632	-	-	-	22,260	-	$ -	$28,715
Peter P. Radetich	5/15/2017	$50,787	$203,149	$406,298	-	-	-	22,610	-	$ -	$29,167

(1) The amounts shown in column (c) reflect Incentives that would be paid for achieving 80% of all stipulated plan targets. The amounts shown in column (d) reflect Incentives that would be paid for achieving 100% of all stipulated plan targets. The amounts shown in column (e) reflect the maximum Incentives that would be paid under the stipulated plan. Further discussion of Incentive plan calculations is provided under the section entitled "Annual Cash Incentive Compensation," found earlier in this annual report on Form 10-K for the year ended December 31, 2017 under the heading "Performance-Based Incentives."

Grants of Plan-Based Awards

Each of the Non-Equity Incentive Plan Awards represented in the table above were Incentive awards granted to the named executive officers during 2017. Such Incentive awards are described earlier in this report under the heading "Performance-Based Incentives." The formula for calculating each executive officer's Incentive provides that at least eighty percent (80%) of the stipulated plan target ("Threshold") must be achieved before any remuneration is awarded for that objective. If the Threshold is achieved, the executive officer receives fifty percent (50%) of the designated plan award[8] for that objective. Then, for each additional percentage point achieved above the Threshold, up to one hundred percent (100%) of the plan target ("Objective Goal"), the executive officer receives another two and one-half percent (2.5%) of the designated plan award for that objective. For each additional percentage point (1%) achieved above the Objective Goal, the executive officer receives another five percent (5%) of the designated plan award for that objective. Each plan prohibits the receipt of amounts in excess of two hundred percent (200%) of the designated plan award for that objective.

Pursuant to Company policies, an Incentive is only earned by and payable to an individual who remains in the Company's employ on the date of Incentive distribution. Incentive payments for 2017 were made on February 23, 2018.

Each of the equity awards represented in the table above was granted pursuant to the 2010 Equity Award Plan. Except for certain restricted shares awarded to Mr. Laubacker upon his promotion to CFO, the restricted stock unit awards represented in the table above were granted by the Board to the named executive officers on May 15, 2017 and include a performance condition. Under the grants, the stock price of the Company's common shares must increase by an average of fifty percent (50%) for thirty consecutive days, from $5.75 to $8.63, within three years from the date of grant for fifty percent (50%) of the share units to vest. The remaining share units will vest to the named executive officers if the stock price increases by an average of one hundred percent (100%) for thirty consecutive days, from $5.75 to $11.50, within three years from the date of grant. If the stock price targets are not met within three years from the date of grant, the share units represented by the grants will expire. The Company intends to again only grant performance restricted share units to the executive officers with the same vesting criteria in 2018.

Restricted stock totaling 8,000 shares, and stock options representing 24,900 shares included in the table above, were granted by the Board to Mr. Laubacker following his promotion to CFO.

Recipients of both stock option and restricted stock awards were required to enter into agreements with the Company governing the vesting, exercise and/or transferability (as applicable) of such awards. Vesting requirements for stock option and restricted stock awards and restricted stock unit awards are based solely on continued employment.

[6] The designated plan award is generally calculated as a percentage of annual base salary. In 2017, the designated plan awards were: (i) for Mr. Crumlish, CEO, one hundred seven.three-tenths percent (107.3%) of base salary actually paid, (ii) for Mr. Laubacker, seventy-two.and eight-tenths (72.8%) of base salary actually paid, (iii) for Mr. Gydé, SVP, fifty-one percent (51%) of base salary actually paid, (v) for Mr. Radetich, SVP, seventy-one.and eight-tenths percent (71.8%) of base salary actually paid.

2017 OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

	Option Awards						Stock Awards			
Name (a)	Number of Securities Underlying Unexercised Options Exercisable (#) (b)	Number of Securities Underlying Unexercised Options Unexercisable (#) (c)		Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#) (d)	Option Exercise Price ($) (e)	Option Exercise Date (f)	Number of Shares or Units of Stock That Have Not Vested (#) (g)	Market Value of Shares or Units of Stock That Have Not Vested ($) (h)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#) (i)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($) (j)
Arthur W. Crumlish	20,000	-		-	$ 4.79	5/13/2018	-	-	-	-
	20,000	-		-	$ 4.90	5/12/2019	-	-	-	-
	20,000	-		-	$ 7.18	2/16/2020	-	-	-	-
	10,000	-		-	$ 12.16	2/15/2021	-	-	-	-
	9,000	-		-	$ 15.04	2/14/2022	-	-	-	-
	9,000	-		-	$ 20.68	2/12/2023	-	-	-	-
	6,750	2,250	(ca)	-	$ 16.93	2/19/2024	-	-	-	-
	7,250	7,250	(cb)	-	$ 7.48	11/10/2025	-	-	-	-
	45,096	135,288	(cc)	-	$ 4.95	8/9/2026	-	-	-	-
	-			-	-	-	111,692	$ 569,629	-	-
John M. Laubacker	5,000	-		-	$ 4.79	5/13/2018	-	-	-	-
	5,000	-		-	$ 4.90	5/12/2019	-	-	-	-
	5,000	-		-	$ 7.18	2/16/2020	-	-	-	-
	7,500	-		-	$ 12.16	2/15/2021	-	-	-	-
	7,000	-		-	$ 15.04	2/14/2022	-	-	-	-
	7,000	-		-	$ 20.68	2/12/2023	-	-	-	-
	5,250	1,750	(la)	-	$ 16.93	2/19/2024	-	-	-	-
	5,200	5,200	(lb)	-	$ 7.48	11/10/2025	-	-	-	-
	-	24,900	(lc)	-	$ 5.75	5/15/2027	-	-	-	-
	-	-		-	-	-	44,313	$ 225,996	-	-

Filip J.L. Gydé	20,000	-		-	$ 4.79	5/13/2018	-	-	-	-
	20,000	-		-	$ 4.90	5/12/2019	-	-	-	-
	20,000	-		-	$ 7.18	2/16/2020	-	-	-	-
	10,000	-		-	$ 12.16	2/15/2021	-	-	-	-
	9,000	-		-	$ 15.04	2/14/2022	-	-	-	-
	9,000	-		-	$ 20.68	2/12/2023	-	-	-	-
	1,687	7,313	(ga)	-	$ 16.93	2/19/2024	-	-	-	-
	1,700	11,900	(gb)	-	$ 7.48	11/10/2025	-	-	-	-
	-	-		-	-	-	50,225	$ 256,148	-	-
Peter P. Radetich	15,000	-		-	$ 4.79	5/13/2018	-	-	-	-
	15,000	-		-	$ 4.90	5/12/2019	-	-	-	-
	15,000	-		-	$ 7.18	2/16/2020	-	-	-	-
	10,000	-		-	$ 12.16	2/15/2021	-	-	-	-
	9,000	-		-	$ 15.04	2/14/2022	-	-	-	-
	9,000	-		-	$ 20.68	2/12/2023	-	-	-	-
	6,750	2,250	(ra)	-	$ 16.93	2/19/2024	-	-	-	-
	7,250	7,250	(rb)	-	$ 7.48	11/10/2025	-	-	-	-
	-	-		-	-	-	50,723	$ 258,687	-	-

(cb)3,625 each vest on 11/10/2018 and 11/10/2019

(cc)45,096 each vest on 8/9/2018, 8/9/2019 and 8/9/2020

(la)1,750 vest on 2/19/18

(lb)2,600 each vest on 11/10/2018 and 11/10/2019

(lc)6,225 each vest on 5/15/2018, 5/15/2019, 5/15/2020, and 5/15/2021

(ga)6,750 vest on 1/1/2018 and 563 vest on 2/19/2018

(gb)850 each vest on 11/10/2018 and 11/10/2019, and 10,200 vest on 1/1/2019

(ra)2,250 vest on 2/19/2018

(rb)3,625 each vest on 11/10/2018 and 11/10/2019

2017 OPTION EXERCISES AND STOCK VESTED

The following table provides information for each of the Company's named executive officers regarding stock option exercises and vesting of stock awards during 2017.

Name of Executive Officer	Option Awards Number of Shares Acquired on Exercise (#) (1)	Option Awards Value Realized on Exercise ($) (1)	Stock Awards Number of Shares Acquired on Exercise (#) (1)	Stock Awards Value Realized on Exercise ($) (1)
Arthur W. Crumlish	20,000	$ 24,000	16,054	$ 87,396
John M. Laubacker	5,000	$ 6,900	8,662	$ 47,519
Brendan M. Harrington	55,000	$ 61,338	12,300	$ 69,352
Filip J. L. Gydé	20,000	$ 15,770	11,911	$ 65,408
Peter P. Radetich	-	$ -	11,962	$ 65,708

(1) For Option Awards, the value realized is the difference between the fair market value of the underlying stock at the time of exercise and the exercise price. For Stock Awards, the value realized is based on the fair market value of the underlying stock on the vest date.

Pension Benefits

The Company maintains an Executive Supplemental Benefit Plan (Supplemental Plan) which provides certain former executives with deferred compensation benefits. The Supplemental Plan was amended as of December 1, 1994 in order to freeze the then-current benefits, provide no additional benefit accruals for participants and to admit no new participants. None of the named executive officers participates in the Supplemental Plan.

Generally, the Supplemental Plan provides for retirement benefits of up to 50% of a participating employee's base compensation at termination or as of December 1, 1994, whichever is earlier, and pre-retirement death benefits calculated using the same formula that is used to calculate normal and early retirement benefits. Benefits are based on service credits earned each year of employment prior to and subsequent to admission to the Supplemental Plan through December 1, 1994. Retirement benefits and pre-retirement death benefits are paid during the 180 months following retirement or death, respectively, while disability benefits are paid until normal retirement age. Normal retirement is age 60. For any participant who is also a participant in the Deferred Compensation Plan, the normal retirement age is increased to 65.

Name of Executive Officer (a)	Executive Contributions in Last FY ($)	Registrant Contributions in Last FY ($)	Aggregate Earnings in Last FY ($)	Aggregate Withdrawals / Distributions	Aggregate Balance at Last FYE ($)

	(b)	(c)	(d)	($) (e)	(f)
Arthur W. Crumlish (1)	-	-	$ 54,956	-	$ 337,860
John M. Laubacker (1)	-	-	$ 6,465	-	$ 143,055
Brendan M. Harrington (1)	-	-	$ 37,162	-	$ 275,128
Filip J. L. Gydé	-	-	$ -	-	$ -
Peter P. Radetich (1)	-	-	$ 43,651	-	$ 265,502

(1) During 2017, the Company discontinued contributions under the Deferred Compensation Plan. Mr. Gydé does not have an account under the Deferred Compensation Plan as he was not eligible to participate in the plan.

On February 2, 1995, the Compensation Committee approved the creation of a Nonqualified Key Employee Deferred Compensation Plan ("Deferred Compensation Plan"). The Deferred Compensation Plan is a successor plan to the Supplemental Plan. Participants in the Deferred Compensation Plan are eligible to elect to defer a percentage of their annual cash compensation. Prior to 2017, participants were eligible to receive a Company contribution of a percentage of their base compensation and annual Incentive if the Company attained annual defined performance objectives for the year. These performance objectives were on an annual basis for the upcoming year. The contribution to the Deferred Compensation Plan by the Company was discontinued during 2017.

Plan participants have a 100% non-forfeitable right to the value of their corporate contribution account after the fifth anniversary of employment with the Company. If a participant terminates employment due to death, disability, retirement at age 65, or upon the occurrence of a Change in Control Event (as defined in the plan), the participant or his or her estate will be entitled to receive the benefits accrued for the participant as of the date of such event. Company contributions will be forfeited in the event a participant incurs a separation from service for cause. Participants are 100%

vested in their own contributions. All amounts in the Deferred Compensation Plan, including elective deferrals, are held as general assets of the Company and are subject to the claims of creditors of the Company.

Potential Payments upon Termination or Change in Control

Agreements with Mr. Crumlish. On October 8, 2001, the Company entered into a change in control agreement with Mr. Crumlish, which was amended and restated effective January 1, 2009. Upon the occurrence of a change in control, Mr. Crumlish would become fully vested in, and entitled to exercise immediately, all stock-related awards granted under any plans or agreements of the Company. The agreement further provides that upon the termination of Mr. Crumlish's employment without cause by the Company, or by him with good reason, within a period beginning six months before a change in control and ending 24 months following a change in control, Mr. Crumlish will receive a lump sum payment equal to two times his full salary and two times his average annual Incentive over the last three years as well as an additional lump sum to cover fringe benefits. Under his agreement, a change in control occurs if (1) the Company's stockholders approve (a) the dissolution or liquidation of the Company, (b) the merger or consolidation or other reorganization of the Company with any other entity other than a subsidiary of the Company, or (c) the sale of all or substantially all of the Company's business or assets, or (2) any person other than the Company or its subsidiaries or employee benefit plans becomes the beneficial owner of more than 20% of the combined voting power of the Company's then-outstanding securities, or (3) during any period not longer than two consecutive years, individuals who at the beginning of such period constituted the Board cease to constitute at least a majority thereof, unless the election of each new Board member was approved by a vote of at least three-quarters of the Board members then still in office who were Board members at the beginning of such period.

If a change in control had occurred on Friday, December 29, 2017, all of Mr. Crumlish's unvested stock options and restricted stock awards would have become fully vested as of that date.[9] If the Company's stock price was $5.10 (which was the closing price of the stock on December 29, 2017), Mr. Crumlish could potentially have realized gains, before tax, from the sale of securities that had vested solely as a result of a change in control in the following amounts: (i) $569,629 from the sale of restricted stock and (ii) $20,293 from the exercise of those stock options.

In the event of a qualifying termination of employment, Mr. Crumlish would have been entitled to receive a lump-sum cash payment from the Company totaling $1,233,948 following his termination. This payment equals two times the sum of Mr. Crumlish's current base salary[10] and his average annual Incentive payment from the last three years and includes an amount equal to twenty-five percent (25%) of Mr. Crumlish's current base salary and his highest annual Incentive payment from the last three years.[11]

Mr. Crumlish is the only executive officer with an employment agreement affording severance benefits upon termination. Pursuant to the terms of such agreement, in the event of termination by Mr. Crumlish for Good Reason (as that term is defined in the agreement), or by the Company other than for Cause (as that term is defined in the agreement), Mr. Crumlish would receive a lump-sum cash payment equal to his current base salary plus an amount equal to the average annual Incentive paid to Mr. Crumlish during the most recent three-year period. Mr. Crumlish would also continue to receive medical and dental benefits for a period of twelve (12) months. Had Mr. Crumlish's employment been terminated[12] on December 29, 2017, he would have been eligible to receive an initial lump-sum cash payment equal to $546,264. Mr. Crumlish would also receive, for a period of twelve months, continuing medical and dental coverage under any plans he participates in as of the effective date of such termination. Continued medical and dental benefits would likely total approximately $15,993.[13] Pursuant to the terms of Mr. Crumlish's employment agreement, the termination benefits afforded under the change in control agreement will supersede in the event his termination triggers payments under that agreement.

Payments made to Mr. Crumlish pursuant to this agreement are contingent upon his adherence to certain restrictive covenants, which were effective from the date of the agreement and would continue until one year after his separation from the Company. These restrictive covenants generally prohibited Mr. Crumlish from, directly or indirectly: (i) engaging in any business activity which competes with the Company, (ii) soliciting or hiring any of the Company's employees, (iii) canvassing or soliciting customers of the Company, (iv) willfully dissuading or encouraging any person from conducting business with the Company or (v) intentionally disrupting any supplier relationship.

[7] Such awards are more fully described in the table entitled "Outstanding Equity Awards at Fiscal Year-End."
[8] Mr. Crumlish's salary was $410,000 as of December 30, 2017.
[9] This amount is intended to cover fringe benefits such as 401(k), health, medical, dental, disability and similar benefits for a period of twenty-four months.
[10] The severance trigger requires that the termination be made either by Mr. Crumlish for Good Reason or by the Company other than for Cause.
[11] This amount reflects the total costs paid for medical, dental and disability insurance during 2017.

Agreements with Other Executive Officers. Except for Mr. Gydé,[14] each of the named executive officers has entered into a change in control agreement with the Company. These agreements contain provisions generally similar to those of Mr. Crumlish's change in control agreement. All executive officers Change in Control agreements contain double trigger mechanisms.

If a change in control occurred on Friday, December 29, 2017, then each of the named executive officers (excluding Mr. Gydé) would have immediately become fully vested in any stock option or restricted stock awards previously granted.[15] If the stock price of the Company was $5.10, which was the closing price of the stock on December 29, 2017, then the named executive officers could potentially have realized gains, before tax, from the sale of vested securities in the following amounts:

Name of Executive Officer	Restricted Stock	Stock Options
John M. Laubacker	$225,996	$ -
Filip J. L. Gydé	$256,148	$ -
Peter P. Radetich	$258,687	$ -

Had the abovementioned executive officers' employment been terminated without cause by the Company or by themselves with good reason within 6 months prior to or 24 months following such a change in control, they would also have been entitled to receive, by the tenth day following their termination, lump-sum cash payments from the Company in the following amounts:

- Mr. Laubacker would have received a lump-sum payment of $776,161; and

- Mr. Radetich would have received a lump-sum payment of $804,901.

These payments equal two (2) times the sum of each individual's current annual salary[16] and their average annual Incentive payment from the last three years; and also include an amount equal to twenty-five percent (25%) of each individual's current base salary and the highest annual incentive payment from the last three years.[17]

2017 DIRECTOR COMPENSATION

Name of Director (a)	Fees Earned or Paid in Cash ($) (b)	Stock Awards ($) (c)	Option Awards ($) (d)	Non-Equity Incentive Plan Compensation ($) (e)	Change in Pension Value and Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($) (g)	Total ($) (h)

					(f)		
James R. Helvey III	$165,000	$ -	$ -	$ -	$ -	$ -	$165,000
David H. Klein	$160,000	$ -	$ -	$ -	$ -	$ -	$160,000
William D. McGuire	$37,500	$ -	$ -	$ -	$ -	$ -	$37,500
Valerie Rahmani	$162,137	$ -	$ -	$ -	$ -	$ -	$162,137
Daniel J. Sullivan	$250,000	$ -	$ -	$ -	$ -	$ -	$250,000
Owen J. Sullivan	$144,643	$ -	$ -	$ -	$ -	$ -	$144,643

As of December 31, 2017, Mr. Daniel J. Sullivan had been granted 40,000 shares of Company restricted stock. Mr. Klein, who was appointed to the Board in September 2012, Mr. Helvey and Ms. Rahmani, who were appointed to the board in November 2015, and Mr. Owen Sullivan, who was appointed in February 2017, have not received any grants of restricted shares. This restricted stock vests upon retirement from the Board. During 2017, Daniel J. Sullivan elected to place $150,000 of his director fees in the Company's Director Deferred Compensation Plan (as defined below). Messrs. Helvey and Klein, and Ms. Rahmani elected to place $75,000 of their director fees in the Director Deferred Compensation Plan, while Owen J. Sullivan elected to contribute $56,250 to the Director Deferred Compensation Plan. Mr. McGuire, who retired from the Board in February 2017, contributed $18,750 to the Director Deferred Compensation Plan. All of the directors used their contributions to the Deferred Director Compensation Plan to purchase share units of the Company's stock.

[12] Since Belgian law mandates certain separation benefits, the Company does not maintain a change in control agreement with Mr. Gydé.

[13] Such awards are more fully described in the table entitled "Outstanding Equity Awards at Fiscal Year-End."

[14] Salaries as of December 30, 2017 were $280,000 for Mr. Laubacker, and $283,000 for Mr. Radetich.

[15] This amount is intended to cover fringe benefits such as 401(k), health, medical, dental, disability and similar benefits for a period of twenty-four months.

As of December 31, 2017, the directors had the following number of stock options outstanding: Helvey (0), Klein (33,096), McGuire (125,300), Rahmani (0), Daniel J. Sullivan (200,000), and Owen J. Sullivan (0).

In 2010, the Company's shareholders approved the Non-Employee Director Deferred Compensation Plan ("Director Deferred Compensation Plan"). Although no set benefits or amounts were granted under the Plan in 2017, the Director Deferred Compensation Plan allows non-employee directors the ability to defer up to 100% of their total director compensation. Beginning in 2018, the Board has elected to eliminate cash payments and take their compensation wholly in deferred stock units, which are granted under the 2010 Equity Award Plan and deposited into the Director Deferred Compensation Plan.

For 2017, each director, except Mr. Owen J. Sullivan who joined the Board in February 2017, received a quarterly payment of $18,750 in cash and another quarterly cash contribution of $18,750, which was deposited into the Director's Deferred Compensation Account. Mr. Daniel J. Sullivan elected to also contribute his quarterly cash payment into the Director Deferred Compensation Plan. Mr. Owen J. Sullivan received $144,643 during 2017, of which $56,750 was deposited into the Director Deferred Compensation Plan. Mr. McGuire, who retired from the Board in February 2017, received $37,500 during 2017, of which $18,750 was deposited in the Director Deferred Compensation Plan. The chairman of the Board of Directors (Mr. Daniel J. Sullivan) also received a $100,000 annual fee. The chairman of the Audit Committee (Mr. Helvey) received a $15,000 annual fee, and the Chairman of the Compensation Committee (Ms. Rahmani) received a $10,000 annual fee, while the Chairman of the Nominating and Governance Committee (Mr. Klein) received an annual fee of $10,000. Directors are reimbursed for expenses they incur while attending Board and committee meetings. Mr. Crumlish does not receive any additional compensation for his services as a director.

The Company has adopted stock ownership guidelines requiring each independent director to own Company shares valued at five (5) times the director's annual cash retainer. In 2017, all of the Directors elected to purchase units of the Company's stock with 100% of the monies contributed towards their Deferred Compensation Plan Accounts.

The Director Deferred Compensation Plan is administered by the Compensation Committee in accordance with Section 409A of the Internal Revenue Code. All amounts credited to the participant are invested, as approved by the Compensation Committee, and the participant is credited with the actual earnings of the investments. Company contributions, including investment earnings, may be in cash or the stock of the Company. Plan participants have an immediate 100% non-forfeitable right to the value of their contributions. If a participant does not make an election in the time and manner specified in the Plan, payment of the vested value of his or her account will be paid in shares for share units owned, and in cash for the cash balance in their account. A participant's eligibility terminates upon retirement or resignation from service.

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

Security Ownership of Certain Beneficial Owners

As of February 28, 2018, the following persons were beneficial owners of more than five percent of the Company's common stock. The beneficial ownership information presented is based upon information furnished by each person or contained in filings made with the Securities and Exchange Commission. Except as otherwise indicated, each holder has sole voting and investment power with respect to the shares indicated. The following table shows the nature and amount of their beneficial ownership.

Title of Class	Name and Address of Beneficial Owner	Amount and Nature of Ownership	Percent of Class	
Common Stock	Neil S. Subin 3300 South Dixie Highway, Suite 1-365 West Palm Beach, FL 33405	1,331,761 (1)	8.7	%
Common Stock	Royce and Associates, LP 745 Fifth Avenue New York, NY 10151	1,119,620 (2)	7.3	%
Common Stock	Minerva Advisors LLC, and related parties 50 Monument Road, Suite 201 Bala Cynwyd, PA 19004	1,113,211 (3)	7.3	%
Common Stock	Dimensional Fund Advisors LP Building One 6300 Bee Cave Road Austin, TX 78746	794,567 (4)	5.2	%

(1) Based solely on information contained in a Schedule 13G filed January 23, 2018, indicating that Neil S. Subin has sole voting and dispositive power over 1,297,033 shares; and shared voting and dispositive power over 34,728 shares.
(2) Based solely on information contained in a Schedule 13G filed January 22, 2018, indicating that Royce & Associates LP has sole voting and dispositive power over 1,119,620 shares.
(3) Based solely on information contained in a Schedule 13G filed on February 13, 2018, indicating that Minerva Advisors LLC, Minerva Group, LP, Minerva GP, LP, Minerva GP, Inc. and David P. Cohen have sole voting power and sole dispositive power over 730,950 shares; and that Minerva Advisors LLC and David P. Cohen have shared voting power and share dispositive power over 382,261 shares.
(4) Based solely on information contained in a Schedule 13G filed February 9, 2018, indicating that Dimensional Fund Advisors LP has sole voting and dispositive power over 794,567 shares.

Security Ownership by Management

The table below sets forth, as of February 28, 2018, the beneficial ownership of the Company's common stock by (i) each director and nominee for director individually, (ii) each executive officer named in the summary compensation table individually, and (iii) all directors and executive officers of the Company as a group.

Name of Individual or Number in Group	Shares Owned	Shares Beneficially Owned (1)	Total Ownership (2)	Percent of Class	
Arthur W. Crumlish	251,961	149,316	401,277	2.6	%
James R. Helvey III	36,253	-	36,253	0.2	%
David H. Klein	50,770	33,096	83,866	0.5	%
Valerie Rahmani	36,253	-	36,253	0.2	%

Daniel J. Sullivan	174,053	200,000	374,053	2.4	%
Owen J. Sullivan	17,354	-	17,354	0.1	%
Filip J.L. Gydé	136,369	98,700	235,069	1.5	%
John M. Laubacker	73,415	48,700	122,115	0.8	%
Peter P. Radetich	104,575	89,250	193,825	1.3	%
All directors and executive officers as a group (9 persons)	881,003	619,062	1,500,065	9.6	%

(1) Amounts represent number of shares available to purchase through the exercise of options that were exercisable on or within 60 days after February 28, 2018.

(2) The beneficial ownership information presented is based upon information furnished by each person or contained in filings made with the Securities and Exchange Commission. Except as otherwise indicated, each holder has sole voting and investment power with respect to the shares indicated.

The following table sets forth, as of December 31, 2017, certain information related to the Company's compensation plans under which shares of its common stock are authorized for issuance:

	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities listed in column (a)) (c)
Equity compensation plans approved by security holders:			
2010 Equity Award Plan	887,055	$ 11.74	2,200,000
2000 Equity Award Plan	734,425	$ 5.13	—
1991 Restricted Stock Plan	—	$ —	4,000
Equity compensation plans not approved by security holders:			
None	—	$ —	—
	1,621,480		2,204,000

At December 31, 2017, the Company did not have any outstanding rights or warrants. All outstanding awards are either stock options or restricted stock.

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

The Board of Directors affirmatively determined in February 2018 that each of the Company's five non-management directors, which include James R. Helvey III, David H. Klein, Valerie Rahmani, Daniel J. Sullivan, and Owen J. Sullivan, is an independent director in accordance with our corporate governance policies and the standards of the NASDAQ Stock Market ("NASDAQ"). Messrs. Daniel J. Sullivan and Owen J. Sullivan are not related. As a result of these five directors being independent, a majority of our Company's Board of Directors is currently independent as so defined. The Board of Directors has determined that there are no relationships between the Company and the directors classified as independent other than service on our Company's Board of Directors.

The foregoing independence determination also included the conclusions of the Board of Directors that:

- each member of the Audit Committee, Nominating and Corporate Governance Committee, and Compensation Committee described in this proxy statement is respectively independent under the standards listed above for purposes of membership on each of these committees; and

- each of the members of the Audit Committee also meets the additional independence requirements under Rule 10A-3(b) of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”).

Mr. Daniel J. Sullivan serves as the Chairman of the Board of Directors and is responsible for scheduling and setting the agenda for the executive sessions of the independent directors. Such executive sessions are expected to occur at regularly scheduled times during the fiscal year ending December 31, 2018, typically in conjunction with a regularly scheduled Board meeting, in addition to the separate meetings of the standing committees of the Board of Directors.

Item 14.Principal Accounting Fees and Services

Appointment of Auditors and Fees

The Audit Committee appointed KPMG LLP (KPMG) as the independent registered public accounting firm to audit the Company’s financial statements for fiscal 2017. Ratification by our shareholders of the selection of KPMG as our independent registered accounting firm is not required by our bylaws or otherwise. However, the Board submitted the selection of KPMG as a matter of good corporate practice. Approval of the proposal requires a majority of the votes cast on the proposal. If our shareholders fail to ratify this selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee, in its discretion, may direct the appointment of a different independent registered public accounting firm at any time during the year if it determines that such a change would be in the best interests of the Company.

To the best of the Company's knowledge, no member of that firm has any past or present interest, financial or otherwise, direct or indirect, in the Company or any of its subsidiaries. Matters involving auditing and related functions are considered and acted upon by the Audit Committee. The Audit Committee has determined that the provision of services described under "All Other Fees," below is compatible with maintaining the independent registered public accounting firm's independence.

Audit Fees —The aggregate fees billed for professional services rendered by KPMG for the audit of the Company's annual financial statements for the last two fiscal years, including the Company's foreign subsidiaries, the reviews of the financial statements included in the Company's Form 10-Qs, and services rendered in connection with the Company's obligations under Section 404 of the Sarbanes-Oxley Act of 2002 and related regulations were approximately $615,400 and $580,600 in 2017 and 2016, respectively.

Audit-Related Fees —The aggregate fees billed for assurance and related services rendered by KPMG for the last two fiscal years that are reasonably related to the performance of the audit or review of the Company's financial statements were $0 in both 2017 and 2016.

Tax Fees —The Company was billed $0 for fees in both 2017 and 2016 for professional services rendered by KPMG for tax compliance, tax advice and tax planning.

All Other Fees — No other fees were paid to KPMG in 2017 or 2016.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Index to Consolidated Financial Statements and Financial Statement Schedule

(1) Financial Statements:

(2) Index to Consolidated Financial Statement Schedule

Financial statement schedule:

(b) Exhibits

The Exhibits to this annual report on Form 10-K are listed on the attached Exhibit Index

EXHIBIT INDEX

Exhibit		Description	Reference
2.	(a)	Share Purchase Agreement, dated as of February 15, 2018, by and between Computer Task Group IT Solutions S.A. and Financiere Soft SAS	(16)
3.	(a)	Restated Certificate of Incorporation of Registrant	(3)
	(b)	Restated By-laws of Registrant	(14)
4.	(a)	Restated Certificate of Incorporation of Registrant	(3)
	(b)	Restated By-laws of Registrant	(14)
	(c)	Specimen Common Stock Certificate	(3)
10.	(a)	Computer Task Group, Incorporated Non-Qualified Key Employee Deferred Compensation Plan 2007 Restatement	(2) +
	(b)	2017 Key Employee Compensation Plans	(17) +
	(c)	Computer Task Group, Incorporated 1991 Restricted Stock Plan	(3) +
	(d)	Computer Task Group, Incorporated 2000 Equity Award Plan	(4) +
	(e)	Computer Task Group, Incorporated Executive Supplemental Benefit Plan 1997 Restatement	(3) +
	(f)	First Amendment to the Computer Task Group, Incorporated Executive Supplemental Benefit Plan 1997 Restatement	(3) +
	(g)	Compensation Arrangements for the Named Executive Officers	# +
	(h)	Employment Agreement, signed February 8, 2017, between the Registrant and Arthur W. Crumlish	(11) +
	(i)	Officer Change in Control Agreement	(5) +
	(j)	Computer Task Group, Incorporated First Employee Stock Purchase Plan (Ninth Amendment and Restatement)	(7) +
	(k)	Computer Task Group, Incorporated 1991 Employee Stock Option Plan	(1) +
	(l)	Restated Computer Task Group, Incorporated 2010 Equity Award Plan	(14) +
	(m)	Computer Task Group, Incorporated Non-Employee Director Deferred Compensation Plan	(6) +
	(n)	Loan Agreement, dated as of October 30, 2015, among Computer Task Group, Incorporated, KeyBank National Association, and Manufacturers and Traders Trust Company	(8)
	(o)	Computer Task Group, Incorporated Indemnification Agreement (Directors)	(12) +
	(p)	Separation Agreement dated July 19, 2016 between Computer Task Group, Incorporated and Clifford B. Bleustein	(9) +
	(q)	Second Amendment to the Credit Agreement dated November 16, 2016 with Keybank National Association as Administrative Agent for the Lenders as defined in the Credit Agreement	(10)
	(r)	Computer Task Group, Incorporated Indemnification Agreement (Executive Officers)	(12) +
	(s)	Change in Control Agreement, 2017	(12) +
	(t)	Separation Agreement dated April 26, 2017 between Computer Task Group, Incorporated and Brendan M. Harrington	(13) +
	(u)	Credit Agreement, dated as of December 21, 2017, among Computer Task Group, Incorporated as Borrower, with KeyBank National Association as Administrative Agent, Swing Line Lender and Issuing Lender and KeyBanc Capital Markets Inc. as Lead Arranger and Sole Book Runner	(15)
21.		Subsidiaries of the Registrant	#
23.		Consent of Experts and Counsel	#
31.	(a)	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	#
	(b)	Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	#
32.		Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	##
101.INS		XBRL Instance Document	#

101.SCH	XBRL Taxonomy Extension Schema Document	#
101.CAL	XBRL Taxonomy Extension Calculation Linkbase	#
101.LAB	XBRL Taxonomy Extension Label Linkbase	#
101.PRE	XBRL Taxonomy Extension Presentation Linkbase	#
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	#

References

Filed herewith

Furnished herewith
\+ Management contract or compensatory plan or arrangement
(1) Filed as an Exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1996, and incorporated herein by reference (file No. 001-09410 filed on March 28,1997)
(2) Filed as an Exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2006, and incorporated herein by reference (file No. 001-09410 filed on March 7, 2007)
(3) Filed as an Exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2007, and incorporated herein by reference (file No. 001-09410 filed on March 10, 2008)
(4) Filed as an Exhibit to the Registrant's Form 8-K on November 18, 2008, and incorporated herein by reference (file No. 001-09410)
(5) Filed as an Exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2008, and incorporated herein by reference (file No. 001-09410 filed on February 26, 2009)
(6) Filed as Appendix A to the Registrant's Proxy Statement on Schedule 14A, dated April 2, 2010, for its Annual Meeting of Shareholders held on May 12, 2010 (file No. 001-09410 filed on March 31, 2010)
(7) Filed as Exhibit A to the Registrant's Proxy Statement on Schedule 14A dated April 4, 2012, for its Annual Meeting of Shareholders held on May 9, 2012 (file No. 001-09410 filed on April 4, 2012)
(8) Filed as an Exhibit to the Registrant's Form 8-K on November 2, 2015, and incorporated herein by reference (file No. 001-09410)
(9) Filed as an Exhibit to the Registrant's Form 8-K on July 22, 2016 and incorporated herein by reference (file No. 001-09410)
(10) Filed as an Exhibit to the Registrant's Form 8-K on November 17, 2016 and incorporated herein by reference (file No. 001-09410)
(11) Filed as an Exhibit to the Registrant's Form 8-K on February 13, 2017, and incorporated herein by reference (file No. 001-09410)
(12) Filed as an Exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2016, and incorporated herein by reference (file No. 001-09410 filed on February 24, 2017)
(13) Filed as an Exhibit to the Registrant's Form 8-K on April 28, 2017, and incorporated herein by reference (file No. 001-09410)
(14) Filed as an Exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 29, 2017, and incorporated herein by reference (file No. 001-09410 filed on October 26, 2017)
(15) Filed as an Exhibit to the Registrant's Form 8-K on December 26, 2017, and incorporated herein by reference (file No. 001-09410)
(16) Filed as an Exhibit to the Registrant's Form 8-K on February 15, 2018, and incorporated herein by reference (file No. 001-09410)
(17) Included in this Annual Report on Form 10-K under the caption entitled "Baseline Compensation – Performance-Based Incentives – Annual Cash Incentive Compensation," and incorporated herein by reference

Item 16. Form 10-K Summary
None.

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COMPUTER TASK GROUP, INCORPORATED

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS

(amounts in thousands)

	Balance at January 1	Additions		Deductions		Balance at December 31
2017						
Accounts deducted from accounts receivable -						
Allowance for doubtful accounts	$ 469	96	A	(432	) A	$ 133
Accounts deducted from deferred tax assets -						
Deferred tax asset valuation allowance	$ 2,650	469	B	(614	) B	$ 2,505
2016						
Accounts deducted from accounts receivable -						
Allowance for doubtful accounts	$ 377	276	A	(184	) A	$ 469
Accounts deducted from deferred tax assets -						
Deferred tax asset valuation allowance	$ 2,349	518	B	(217	) B	$ 2,650
2015						
Accounts deducted from accounts receivable -						
Allowance for doubtful accounts	$ 891	372	A	(886	) A	$ 377
Accounts deducted from deferred tax assets -						
Deferred tax asset valuation allowance	$ 3,135	192	B	(978	) B	$ 2,349

A These balances primarily reflect additions to the allowance charged to expense resulting from the normal course of business, less deductions for recovery of accounts that were previously reserved, and additions and deductions for foreign currency translation

B These balances primarily reflect additions or deductions to the valuation allowance associated with the Netherlands defined-benefit plan and changes in foreign currency exchange rates, and deductions for expiring net operating loss carryforwards

SIGNATURES

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

COMPUTER TASK GROUP, INCORPORATED

By /s/ Arthur W. Crumlish
Arthur W. Crumlish
President and Chief Executive Officer

Dated: March 14, 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.

	Signature	Title	Date
(i)	Principal Executive Officer /s/ Arthur W. Crumlish Arthur W. Crumlish	President and Chief Executive Officer	March 14, 2018
(ii)	Principal Accounting and Principal Financial Officer /s/ John M. Laubacker John M. Laubacker	Chief Financial Officer	March 14, 2018
(iii)	Directors		
	/s/ Arthur W. Crumlish	Director	March 14, 2018

Arthur W. Crumlish		
/s/ James R. Helvey III James R. Helvey III	Director	March 14, 2018
/s/ David H. Klein David H. Klein	Director	March 14, 2018
/s/ Valerie Rahmani Valerie Rahmani	Director	March 14, 2018
/s/ Daniel J. Sullivan Daniel J. Sullivan	Chairman of the Board of Directors	March 14, 2018
/s/ Owen J. Sullivan Owen J. Sullivan	Director	March 14, 2018