FIRST COMMONWEALTH FINANCIAL CORP /PA/
Form 8-K
October 26, 2016

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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 OR 15(d) of
the Securities Exchange Act of 1934
Date of Report (Date of earliest event reported): October 26, 2016

First Commonwealth Financial Corporation
(Exact name of registrant as specified in its charter)

Pennsylvania	001-11138	25-1428528
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

601 Philadelphia Street, Indiana, PA	15701
(Address of principal executive offices)	(Zip Code)

Registrant’s telephone number, including area code: (724) 349-7220
Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

..
Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
..
Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
..
Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
..
Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.02 Results of Operations and Financial Condition

On October 26, 2016, First Commonwealth Financial Corporation (the "Company") issued a press release announcing financial results for the three and nine month periods ended September 30, 2016. A copy of this press release and the related earnings tables are furnished as Exhibit 99.1 to this report and incorporated herein by reference.

Item 7.01 Regulation FD Disclosure

On October 26, 2016, the Company announced a cash dividend of $0.07 per share of the Company's common stock. The dividend declaration is included in the press release announcing financial results for the three and nine month periods ended September 30, 2016. A copy of this press release is furnished as Exhibit 99.1 to this report and incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits

Exhibits

99.1 Press Release announcing Third Quarter 2016 Financial Results and Declaration of Quarterly Dividend.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: October 26, 2016

FIRST COMMONWEALTH FINANCIAL CORPORATION

By: /s/ James R. Reske
Name: James R. Reske
Title: Executive Vice President, Chief Financial Officer and Treasurer

">The USG may modify, curtail or terminate its contracts and subcontracts at its convenience without prior notice, upon payment for work done and commitments made at the time of termination. Modification, curtailment or termination of our major programs or contracts could have a material adverse effect on our business, financial condition, results of operations and cash flows.

- Our USG business is subject to specific procurement regulations and other requirements. These requirements, although customary in USG contracts, increase our performance and compliance costs. These costs might increase in the future, reducing our margins, which could have a negative effect on our financial condition. Although we have procedures designed to assure compliance with these regulations and requirements, failure to do so under certain circumstances could lead to suspension or debarment, for cause, from USG contracting or subcontracting for a period of time and could have a material adverse effect on our business, financial condition, results of operations and cash flows and could adversely impact our reputation and our ability to receive other USG contract awards in the future.
- The costs we incur on our USG contracts, including allocated indirect costs, may be audited by USG representatives. Any costs found to be improperly allocated to a specific contract would not be reimbursed, and such costs already reimbursed would have to be refunded, which could have a material adverse effect on our business, financial condition, results of operations and cash flows. Moreover, if any audit were to reveal the existence of improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the USG.
- We are from time to time subject to governmental inquiries and investigations of our business practices due to our participation in domestic and foreign government contracts and programs and our transaction of business domestically and internationally. Adverse findings associated with any such inquiry or investigation could also result in civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with domestic and foreign governments.

Our business may be adversely affected by changes in budgetary priorities of the USG.

Because a significant percentage of our revenue is derived either directly or indirectly from contracts with the USG, changes in federal government budgetary priorities could directly affect our financial performance. A significant decline in government expenditures, a shift of expenditures away from programs that we support or a change in federal government contracting policies could cause federal government agencies to reduce their purchases under contracts, to exercise their right to terminate contracts at any time without penalty or not to exercise options to renew contracts.

Exports of certain of our products are subject to various export control regulations and authorizations, and we may not be successful in obtaining the necessary U.S. Government approvals and resultant export licenses for proposed sales to certain foreign customers.

We must comply with numerous laws and regulations relating to the export of our products and technologies, including, among others, the FMU-152A/B JPF, before we are permitted to sell those products and technologies outside of the United States. Compliance often entails the submission and timely receipt of necessary export approvals, licenses or authorizations from the U.S. Government and, depending on the size and nature of the proposed transaction, may even require the submission of formal notification to the United States Congress, which then has the ability to pass a joint resolution of disapproval blocking or amending the sale. In recent months, the U.S. export licensing environment for munitions, such as the JPF, has been adversely affected by a number of factors, including, but not limited to, the changing geopolitical environment and heightened tensions with other countries (which shift and evolve over time). Accordingly, we can give no assurance that we will be successful in obtaining, in a timely manner or at all, the approvals, licenses or authorizations we need to sell our products and technologies outside the United States, which may result in the cancellation of orders, the incurrence of significant penalties payable by the Company and the return of advance payments to our customers if we do not make deliveries and fulfill our contractual commitments. Any significant delay in, or impairment of, our ability to sell products or technologies outside of the United States could have a material adverse effect on our business, financial condition and results of operations.

The ability to obtain and retain product approvals issued by the Federal Aviation Administration ("FAA") and any intellectual property claims could adversely affect our Aerospace segment’s operating results and profits.
Our Aerospace segment may be impacted by regulations set forth by the FAA to obtain Parts Manufacturer Approvals ("PMAs") to design or produce a modification or replacement aircraft part. The loss or suspension of the Company's product and design approvals could negatively impact our operating results and profits. We believe our current design and production processes that are subject to such regulations by the FAA are in compliance; however, there can be no assurance that we will not lose approvals for our products in the future. Additionally, we may be subject to claims of intellectual property infringement by third parties, including in connection with our PMA business, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.
The cost and effort to start up new aerospace programs could negatively impact our operating results and profits.

The time required and costs incurred to ramp up a new program can be significant and include nonrecurring costs for tooling, first article testing, finalizing drawings and engineering specifications and hiring new employees able to perform the technical work required. New programs can typically involve a greater volume of scrap, higher costs due to inefficiencies, delays in production and learning curves that are often more extended than anticipated, all of which could have a material effect on our business, financial condition, results of operations and cash flows.

Competition from domestic and foreign manufacturers may result in the loss of potential contracts and opportunities.

The aerospace markets in which we participate are highly competitive, and we often compete for work not only with large OEMs but also sometimes with our own customers and suppliers. Many of our large customers may choose not to outsource production due to, among other things, their own direct labor and overhead considerations and capacity utilization objectives. This could result in these customers supplying their own products or services and competing directly with us for sales of these products or services, all of which could significantly reduce our revenues.

Our competitors may have more extensive or more specialized engineering, manufacturing and marketing capabilities than we do in some areas, and we may not have the technology, cost structure, or available resources to effectively compete with them. We believe that developing and maintaining a competitive advantage requires continued investment in product development; engineering; supply chain management; production capabilities, including technology, equipment and facilities; and sales and marketing, and we may not have enough resources to make the necessary investments to do so. Further, our significant customers may attempt to use their position to negotiate price or other concessions for a particular product or service without regard to the terms of an existing contract or the underlying cost of production.

We believe our strategies for our Aerospace segment will allow us to continue to effectively compete for key contracts and customers, but there can be no assurance that we will be able to compete successfully in this market or against such competitors.

We could be negatively impacted by the loss of key suppliers, the consolidation of suppliers, the lack of product availability or changes in supplier programs.

Our business depends on maintaining a sufficient supply of various products to meet our customers' demands. We have long-standing relationships with key suppliers but these relationships generally are non-exclusive and could be terminated by either party. If we were to lose a key supplier, or were unable to obtain the same levels of deliveries from these suppliers and were unable to supplement those purchases with products obtained from other suppliers, it could have a material adverse effect on our business. Additionally, we rely on foreign and domestic suppliers and commodity markets to secure raw materials used in many of the products we manufacture within our Aerospace segment or sell within our Distribution segment. Suppliers have consolidated and formed alliances to broaden their product and integrated system offerings, and achieve critical mass. Supplier consolidation could cause us to compete against certain competitors with greater financial resources, market penetration and purchasing power. This exposes us to volatility in the price and availability of raw materials. In some instances, we depend upon a single source of supply. Supply interruptions could arise from shortages of raw materials, labor disputes or weather conditions affecting suppliers' production, transportation disruptions or other reasons beyond our control. Even if we continue with our current supplier relationships, high demand for certain products may result in us being unable to meet our customers' demands, which could put us at a competitive disadvantage. Additionally, our key suppliers could also increase the pricing of their products, which would negatively affect our operating results if we were not able to pass these price increases through to our customers. We base our supply management process on an appropriate balancing of the foreseeable risks and the costs of alternative practices. To protect ourselves against such risks, we engage in strategic inventory purchases during the year, negotiate long-term vendor supply agreements, monitor our inventory levels and obtain second sources when applicable to ensure that we have the appropriate inventory on hand to meet our customers' requirements.

The adoption of new accounting guidance or changes in the interpretations of existing guidance could affect our financial results.
We prepare our financial statements in conformity with accounting principles generally accepted in the United States. These accounting principles are subject to interpretation by the Financial Accounting Standards Board (“FASB”) and the Securities and Exchange Commission (“SEC”). A change in these principles or interpretations could have a significant effect on our reported financial results, may retroactively affect previously reported results, could cause unexpected financial reporting fluctuations and may require us to make costly changes to our operational processes and accounting systems. In February 2016, the FASB issued Accounting Standard Update ("ASU") 2016-02, Leases (Topic 842), which supersedes nearly all existing generally accepted accounting principles ("GAAP") lease guidance. The updated standard is effective for us in the first quarter of 2019 and we have elected the transition method allowing entities to apply the new standard at the adoption date recognizing a cumulative-effect adjustment in the period of adoption. We have completed our preliminary evaluation of the likely impact of ASU 2016-02 on our consolidated financial statements. For additional information about these matters, please refer to Note 1, Summary of Significant

Accounting Policies - Recent Accounting Standards in the Notes to Consolidated Financial Statements in this Annual Report on Form 10-K. Additionally, during the first quarter of 2018, we implemented ASU 2014-09, Revenue from Contracts with Customers, which superseded nearly all GAAP revenue recognition guidance. For additional information on the impact of this standard, please refer to Note 2, Accounting Changes, in the Notes to Consolidated Financial Statements in this Annual Report on Form 10-K.

Our failure to comply with the covenants contained in our senior credit facility could trigger an event of default, which could materially and adversely affect our operating results and our financial condition.

Our senior credit facility requires us to maintain certain financial ratios and comply with various operational and other covenants. If we were unable to maintain these ratios and comply with such covenants, we would need to seek relief from our lenders in order to avoid, cure or have waived an event of default under the facility. There can be no assurance that we would be able to obtain such relief on commercially reasonable terms or otherwise. If an event of default occurs and is not cured or waived, we may not be able to make further borrowings under the credit facility and our lenders could, among other things, cause all outstanding indebtedness under the credit facility to be due and payable immediately. There can be no assurance that our assets or cash flows would be sufficient to provide us with sufficient liquidity to fund outstanding commitments or meet other business requirements or to enable us to fully repay those amounts or that we would be able to refinance or restructure the indebtedness. If, as or when required, we are unable to repay, refinance or restructure the indebtedness outstanding under our senior credit facility, or amend the financial ratios and covenants contained therein, the lenders under our senior credit facility could elect to terminate their commitments thereunder, cease making further loans and institute foreclosure proceedings against our assets. This, in turn, could result in an event of default under one or more of our other financing agreements, including our convertible notes.

In addition, in the ordinary course of business, certain of our customers require us to deliver standby letters of credit to guarantee our performance under our contractual obligations with them, which are currently issued by certain of our lenders pursuant to our senior credit facility. If we are unable to obtain letters of credit as needed to operate our business as a result of any of the circumstances described above or otherwise, our ability to enter into certain contracts may be adversely affected. Moreover, by their nature, standby letters of credit may be drawn upon by the beneficiaries thereof, which could affect our financial ratios and ability to make additional borrowings. The occurrence of any of these events could have a material adverse effect on our liquidity, financial position or results of operations.

Additional tax exposure and tax law changes could have a material effect on our financial results.

We are subject to income taxes in the United States and certain foreign jurisdictions. The determination of the Company’s provision for income taxes and other tax liabilities requires judgment and is based on legislative and regulatory structures that exist in the jurisdictions in which we operate, and we are periodically under audit by various tax authorities. We regularly assess the potential outcomes of examinations by tax authorities in determining the adequacy of our provision for income taxes. We are currently under audit by various states for the years 2013 through 2017. Although we do not believe that any material adjustments will result from these audits, the outcome of tax audits cannot be predicted with certainty. Any final assessment resulting from tax audits may result in material changes to our past or future taxable income, tax payable or deferred tax assets and may require us to pay penalties and interest that could have a material adverse effect on our results of operations.

On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Reform") was signed into law. One of the major provisions in this legislation was a reduction in the U.S. corporate tax rate from 35% to 21%, effective January 1, 2018. While this rate reduction was favorable to earnings in 2018, the rate change also required a revaluation of our existing net U.S. deferred tax assets as of December 31, 2017. Other provisions of Tax Reform also impacted the Company, but given the rate reduction, the overall impact of the Tax Reform was beneficial to the Company in 2018. For additional information on Tax Reform, please refer to Note 14, Income Taxes, in the Notes to Consolidated Financial Statements in this Annual Report on Form 10-K.

Recently enacted tariffs on certain imports to the United States and other potential changes to U.S. tariff and import/export regulations may have a negative effect on global economic conditions and our business, financial results and financial condition.

In 2018, new tariffs were implemented on imports of steel and aluminum into the United States. As the implementation of tariffs is ongoing, more tariffs may be added in the future. While any steel and aluminum we use in our products is produced primarily in North America, the new tariffs may provide domestic steel and aluminum producers the flexibility to increase their prices, at least to a level where their products would still be priced below foreign competitors once the tariffs are taken into account. These tariffs could have an adverse impact on our financial results, which include, but are not limited to, the following: products we sell include steel and aluminum and if we are unable to pass such price increases through to our customers, it would likely increase our cost of sales and, as a result, decrease our gross margins, operating income and net income. In addition, in response to the new tariffs, a number of other countries are threatening to impose tariffs on U.S. imports, which, if implemented, could increase the price of our products in these countries and may result in our customers looking to alternative sources for our products. This would result in decreased sales, which could have a negative impact on our net income and financial condition. Any of these factors could depress economic activity and restrict our access to suppliers or customers and have a material adverse effect on our business, financial condition and results of operations.

The value of our deferred tax assets could become impaired, which could materially and adversely affect our operating results.

As of December 31, 2018, we had approximately $17.4 million in net deferred tax assets after valuation allowance. These deferred tax assets can be used to offset taxable income in future periods and reduce income taxes payable in those future periods. Each quarter, we determine the probability of the realization of deferred tax assets, using significant judgments and estimates with respect to, among other things, historical operating results, expectations of future earnings and tax planning strategies. In the event that there is insufficient positive evidence to support the valuation of these assets, we may be required to further adjust the valuation allowance to reduce our deferred tax assets. Such a reduction could result in a material non-cash charge in the period in which the valuation allowance is adjusted and could have a material adverse effect on our results of operations.

The freezing of our defined benefit pension plan could trigger a material curtailment adjustment in favor of the USG.

Our defined benefit pension plan was frozen with respect to future benefit accruals effective December 31, 2015. U.S. Government Cost Accounting Standard 413 ("CAS 413") requires the Company to determine the USG’s share of any resulting pension curtailment adjustment attributable to pension expense charged to Company contracts with the USG, which could result in an amount due to the USG if the plan is determined to be in a surplus position or an amount due to the Company if the plan is determined to be in a deficit position. During the fourth quarter of 2016, the Company accrued a $0.3 million liability representing our estimate of the amount due to the USG based on our pension curtailment adjustment calculation, which was submitted to the USG for review in December 2016. The Company has maintained its accrual at $0.3 million as of December 31, 2018. There can be no assurance that the ultimate resolution of this matter will not have a material adverse effect on our results of operations, financial position and cash flows.

Estimates of future costs for long-term contracts impact our current and future operating results and profits.

We generally recognize sales and gross margin on long-term contracts based on the over time method of accounting. This method allows for revenue recognition as our work progresses on a contract and requires that we estimate future revenues and costs over the life of a contract. Revenues are estimated based upon the negotiated contract price, with consideration being given to exercised contract options, change orders and, in some cases, projected customer requirements. Contract costs may be incurred over a period of several years, and the estimation of these costs requires significant judgment based upon the acquired knowledge and experience of program managers, engineers and financial professionals.

Estimated costs are based primarily on anticipated purchase contract terms, historical performance trends, business base and other economic projections. The complexity of certain programs as well as technical risks and the availability of materials and labor resources could affect our ability to accurately estimate future contract costs. Additional factors that could affect recognition of revenue and gross margin under this method include:

- Accounting for initial program costs;
- The effect of nonrecurring work;
- Delayed contract start-up or changes to production schedules;
- Transition of work to or from the customer or other vendors;
- Claims or unapproved change orders;
- Product warranty issues;
- Delayed completion of certain programs for which inventory has been built up;
- Our ability to estimate or control scrap level;
- Accrual of contract losses; and
- Changes in our overhead rates.

Because of the significance of the judgments and estimation processes, it is likely that materially different sales and profit amounts could be recorded if we used different assumptions or if the underlying circumstances were to change. Changes in underlying assumptions, circumstances or estimates may adversely affect current and future financial performance. While we perform quarterly reviews of our long-term contracts to address and lessen the effects of these risks, there can be no assurance that we will not make material adjustments to underlying assumptions or estimates relating to one or more long-term contracts that have a material adverse effect on our business, financial condition, results of operations and cash flows.

We may lose money or generate lower than expected profits on our fixed-price contracts.

Our customers set demanding specifications for product performance, reliability and cost. Most of our government contracts and subcontracts provide for a predetermined, fixed price for the products we make regardless of the costs we incur. Therefore, we must absorb cost overruns, notwithstanding the difficulty of estimating all of the costs we will incur in performing these contracts and in projecting the ultimate level of sales that we may achieve. Our failure to anticipate technical problems, estimate costs accurately, integrate technical processes effectively or control costs during performance of a fixed-price contract may reduce the profitability of a fixed-price contract or cause a loss. While we believe that we have recorded adequate provisions in our financial statements for losses on our fixed-price contracts as required under GAAP, there can be no assurance that our contract loss provisions will be adequate to cover all actual future losses.

The U.S. Navy contract award for the FMU-139 D/B bomb fuze could jeopardize the continued viability and profitability of the Company's FMU-152 A/B bomb fuze program with the U.S. Air Force ("USAF").

The Company currently provides the FMU-152 A/B bomb fuze (also referred to as the JPF) to the USAF and thirty-six other nations, but the U.S. Navy currently utilizes a different fuze - the FMU-139. During 2015, the U.S. Naval Air Systems Command (“NAVAIR”) solicited proposals for a firm-fixed price production contract to implement improvements to the performance characteristics of the FMU-139 (such improved fuze having been designated the FMU-139 D/B). The USAF has stated that, if and when a contract is awarded and production begins, the funds associated with the FMU-152 A/B will be redirected to the FMU-139 D/B. During the third quarter of 2015, the U.S. Navy awarded the FMU-139 D/B contract to a competitor. In the event that the FMU-139 D/B program proceeds as planned and the USAF redirects the funds associated with the FMU-152 A/B to the FMU-139 D/B, our business, financial condition, results of operations and cash flows may be materially adversely impacted. The timing of the impact on our financial statements is dependent on the ability of our competitor to complete the design and qualification phase of the program and other factors. Our competitor has publicly stated that this program will have a 32-month qualification phase, after which production will begin. Due to the complexity of this program, the uncertainty associated with the successful completion of each phase and the pending status of the USAF's final decision to redirect funds to the FMU-139 D/B, the timing and magnitude of the impact on the Company's financial statements is not certain.

A failure to develop and retain corporate accounts at our Distribution segment could adversely impact our financial results.

Companies continue to consolidate their purchases of industrial products through a small number of major distributors or integrated suppliers, rather than a large number of vendors. Our Distribution segment has developed a strategy to compete effectively for corporate accounts, but we face intensifying competition from our competitors, several of which are larger and have a more extensive geographic footprint.

If we are not awarded additional national accounts in the future, or if existing corporate account agreements are not renewed, our sales volume could be negatively impacted, which may result in lower gross margins and weaker operating results. Additionally, national accounts may require an increased level of customer service, such as investments in the form of opening new branches to meet our customers' needs. The cost and time associated with these activities could be significant, and if the relationship is not maintained, we ultimately may not be able to generate a return on these investments.

The loss of the Distribution segment’s key suppliers with whom we have national reseller agreements and/or national distributor agreements could adversely affect our operating results and profits.

An element of our Distribution segment's strategy is to establish alignment with a single vendor in certain portions of its business. As a result, we currently have distribution rights for certain product lines and depend on these distribution rights as a source of business. Many of these distribution rights are ours pursuant to contracts that are subject to cancellation upon little or no prior notice. Although we believe we could obtain alternate distribution rights in the event of such a cancellation, the termination or limitation by any key supplier of its relationship with the Company could result in a temporary disruption of our business and, in turn, could adversely affect our results of operations and financial condition.

A decline in sales at our Distribution segment could adversely impact the vendor incentives and rebates we earn from suppliers.
Some of our suppliers offer vendor incentives and rebates that are tied to the amount of product that we purchase. These incentives and rebates can be market or customer-account specific, or relate to a specified program period. A decline in sales could adversely impact the vendor incentives and rebates we earn from suppliers.

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Our information technology systems, processes and sites may suffer interruptions or failures which may affect our ability to conduct our business.

Our information technology systems provide critical data connectivity, information and services for internal and external users. These interactions include, but are not limited to, ordering and managing materials from suppliers, inventory management, shipping products to customers, processing transactions, summarizing and reporting results of operations, complying with regulatory, legal or tax requirements and other processes necessary to manage our business. Our computer systems face the threat of unauthorized access, computer hackers, computer viruses, malicious code, organized cyber-attacks and other security problems and system disruptions.

Cyber-attacks are evolving and include, but are not limited to, malicious software, destructive malware, attempts to gain unauthorized access to data, manipulation of data, disruption or denial of service attacks and other electronic security breaches that could lead to disruptions in critical systems, unauthorized release of confidential, personal or otherwise protected information, including trade secrets, and corruption of data, networks or systems. We provide products and services to customers who also face cyber threats. Our products and services may be subject to cyber threats and we may not be able to detect or deter such threats, which could result in losses that could adversely affect our customers and our company. Additionally, we could be impacted by cyber threats in products that we use in our partners' and customers' systems that are used in connection with our business. These events, if not prevented or mitigated, could damage our reputation, require remedial action and lead to loss of business, regulatory actions, potential liability and other financial losses. To address the risks to our information technology systems and data, we manage an information security program, maintain strong incident report capabilities and perform daily off-site backups. Additionally, we have put in place business continuity plans and security precautions for our critical systems, including a back-up data center. Updates on cyber security are provided to the Board of Directors at least annually.

In the event our information technology systems are damaged or cease to function properly due to any number of causes, such as catastrophic events, power outages and security breaches resulting in unauthorized access or cyber-attacks, and our information security program, incident report capabilities, business continuity plans and security precautions do not function effectively on a timely basis, we may suffer interruptions in our operations or the misappropriation of proprietary information, which may adversely impact our business, financial condition, results of operations and cash flows.

Our implementation of enterprise resource planning (“ERP”) systems may adversely affect our business and results of operations or the effectiveness of internal controls over financial reporting.

We are currently implementing new ERP systems within our Aerospace and Distribution segments. ERP implementations are complex and time-consuming projects that involve substantial expenditures on system software and implementation activities that take several years. If we do not effectively implement the ERP systems or if the systems do not operate as intended, it could adversely affect our financial reporting systems and our ability to produce financial reports, the effectiveness of internal controls over financial reporting, and our business, financial condition, results of operations and cash flows.

A failure to maintain effective internal controls could adversely affect our ability to accurately report our financial results or prevent fraud.

Our ability to provide assurance with respect to our financial reports and to effectively prevent fraud depends on effective internal control. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements; therefore, even effective controls can only provide reasonable assurance with respect to the preparation and fair presentation of financial statements. If our internal controls were to be compromised, our financial statements could become materially misleading, which could adversely affect the trading price of our common stock. Any material weakness could adversely impact investor confidence in the accuracy of our financial statements, affecting our ability to obtain additional financing. This would likely have an adverse effect on our business, financial condition and the market value of our stock. Additionally, we would be required to incur costs to make the necessary improvements to our internal control systems.

Although management has assessed our internal control over financial reporting as effective based on criteria set forth by the Committee of Sponsoring Organizations - Integrated Framework, we can give no assurance that material weaknesses will not occur in the future nor that existing controls will continue to be adequate to prevent or identify irregularities or ensure fair presentation of our financial statements in the future.

We may make acquisitions or investments in new businesses, products or technologies that involve additional risks, which could disrupt our business or harm our financial condition or results of operations.

As part of our business strategy, we have made, and expect to continue to make, acquisitions of businesses or investments in companies that offer complementary products, services and technologies. Such acquisitions or investments involve a number of risks, including:

- Assimilating operations and products may be unexpectedly difficult;
- Management's attention may be diverted from other business concerns;
- We may enter markets in which we have limited or no direct experience;
- We may lose key employees, customers or vendors of an acquired business;
- We may not be able to achieve the synergies or cost savings we anticipated;
- We may not realize the assigned value of the acquired assets;
- We may experience quality control failures or encounter other customer relationship issues; and
- We may become subject to preexisting liabilities and obligations of the acquired businesses.

These factors could have a material adverse effect on our business, financial condition, results of operations and cash flows. In addition, the consideration paid for any future acquisitions could include our stock or require that we incur additional debt and contingent liabilities. As a result, future acquisitions could cause dilution of existing equity interests and earnings per share.

Certain of our operations are conducted through joint ventures, which entail special risks.

The Company has a 49% equity interest in Kineco-Kaman Composites - India Private Limited, a composites manufacturing joint venture located in Goa, India. The Company relies significantly on the services and skills of its joint venture partner to manage and conduct the local business operations of the joint venture and ensure compliance with all applicable laws and regulations. If our joint venture partner fails to perform these functions adequately, it may adversely affect our business, financial condition, results of operations and cash flows. Moreover, if our joint venture partner fails to honor its financial obligations to commit capital, equity or credit support to the joint venture as a result of financial or other difficulties or for any other reason, the joint venture may be unable to perform contracted services or deliver contracted products unless we provide the necessary capital, equity or credit support.

We may be unable to realize expected benefits from our sales initiatives and cost reduction and restructuring efforts and our profitability may be hurt or business otherwise might be adversely affected.

In both of our segments, we have a number of initiatives to grow sales and win new programs. Additionally, in order to operate more efficiently and control costs, from time to time, we announce restructuring plans, which include workforce reductions as well as facility consolidations and other cost reduction initiatives. These plans are intended to generate operating expense savings through direct cost and indirect overhead expense reductions, as well as other savings. We may undertake further sales growth initiatives, workforce reductions or restructuring actions in the future. These types of sales growth initiatives and cost reduction and restructuring activities are complex. If we do not successfully manage our current initiatives and restructuring activities or any other similar activities that we may undertake in the future, expected efficiencies and benefits might be delayed or not realized, and our operations and business could be disrupted. Risks associated with these initiatives, actions and other workforce management issues include political responses to such actions, unforeseen delays in the implementation of anticipated workforce reductions, additional unexpected costs, adverse effects on employee morale and the failure to meet operational targets, whether due to the loss of employees, work stoppages or otherwise, any of which may impair our ability to achieve anticipated sales or cost reductions and could have a material adverse effect on our business, financial condition, results of operations and cash flows.

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Our financial results of operations could be adversely affected by impairment of our goodwill or other intangible assets.

When we acquire a business, we record goodwill equal to the excess of the amount we pay for the business, including liabilities assumed, over the fair value of the tangible and identifiable intangible assets of the business we acquire. Goodwill and other intangible assets that have indefinite useful lives must be evaluated at least annually for impairment. The specific guidance for testing goodwill and other non-amortized intangible assets for impairment requires management to make certain estimates and assumptions when allocating goodwill to reporting units and determining the fair value of reporting unit net assets and liabilities, including, among other things, an assessment of market conditions, projected cash flows, investment rates, cost of capital and growth rates, which could significantly impact the reported value of goodwill and other intangible assets. Changes in our estimates and assumptions, including economic and market projections in our Distribution Segment and commercial and military program awards in our Aerospace Segment, could adversely impact projected cash flows and the fair value of reporting units. Fair value is generally determined using a combination of the discounted cash flow, market multiple and market capitalization valuation approaches. Absent any impairment indicators, we generally perform our evaluations annually in the fourth quarter, using available forecast information. If at any time we determine an impairment has occurred, we are required to reflect the reduction in value as an expense within operating income, resulting in a reduction of earnings and a corresponding reduction in our net asset value in the period such impairment is identified.

We rely on the experience and expertise of our skilled employees, and must continue to attract and retain qualified technical, marketing and managerial personnel in order to succeed.

Our future success will depend largely upon our ability to attract and retain highly skilled technical, operational and financial managers and marketing personnel. There is significant competition for such personnel in the aerospace and distribution industries. We try to ensure that we offer competitive compensation and benefits as well as opportunities for continued development, and we continually strive to recruit and train qualified personnel and retain key employees. There can be no assurance, however, that we will continue to be successful in attracting and retaining the personnel we require to develop new and enhanced products and to continue to grow and operate profitably.

We are subject to litigation, tax, environmental and other legal compliance risks that could adversely affect our operating results.

We are subject to a variety of litigation, tax and legal compliance risks. These risks include, among other things, possible liability relating to contract-related claims, government contracts, product liability matters, personal injuries, intellectual property rights, taxes, employment, environmental matters and compliance with U.S. and foreign export laws, competition laws, laws governing improper business practices and data privacy laws, including the EU-wide General Data Protection Regulation (the "GDPR"), which became effective in May 2018. In the event that we or one of our business units engage in wrongdoing in connection with any of these kinds of matters, we could be subject to significant fines, penalties, repayments, other damages (in certain cases, treble damages), or suspension or debarment from government contracts. Moreover, our failure to comply with applicable export and trade practice laws could result in civil or criminal penalties and suspension or termination of export privileges.

As a global business, we are subject to complex laws and regulations in the U.S. and other countries in which we operate. Those laws and regulations may be interpreted in different ways. They may also change from time to time, as may related interpretations and other guidance. Changes in laws or regulations could result in higher expenses and payments, and uncertainty relating to laws or regulations may also affect how we conduct our operations and structure our investments and could limit our ability to enforce our rights. Changes in environmental and climate change laws or regulations, including laws relating to greenhouse gas emissions, could lead to new or additional investment in product designs and could increase environmental compliance expenditures. Changes in climate change concerns, or in the regulation of such concerns, including greenhouse gas emissions, could subject us to additional costs and restrictions, including increased energy and raw material costs.

Our financial results may be adversely affected by the outcome of pending legal proceedings and other contingencies that cannot be predicted. In accordance with GAAP, if a liability is deemed probable and reasonably estimable in light of the facts and circumstances known to us at a particular point in time, we make an estimate of material loss contingencies and establish reserves based on our assessment. Subsequent developments in legal proceedings may affect our assessment. The accrual of a loss contingency adversely affects our results of operations in the period in which a liability is recognized. This could also have an adverse impact on our cash flows in the period during which damages are paid.

For a discussion of these matters, please refer to Note 17, Commitments and Contingencies, and Note 11, Environmental Costs, in the Notes to Consolidated Financial Statements in this Annual Report on Form 10-K.

Our foreign operations require us to comply with a number of United States and international laws and regulations, violations of which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We are required to comply with a number of United States and international laws and regulations, such as the U.S. Foreign Corrupt Practices Act of 1977 (the "FCPA"), the U.K. Bribery Act of 2010 (the "Bribery Act"), and other similar anticorruption laws and regulations. The FCPA generally prohibits United States companies or their agents and employees from providing anything of value to a foreign official for the purposes of influencing any act or decision of these individuals in their official capacity to help obtain or retain business, direct business to any person or corporate entity or obtain any unfair advantage. Although we have internal controls, procedures and compliance programs to train our employees and agents with respect to compliance with the FCPA and other applicable international laws and regulations, there can be no assurance that our policies, procedures and programs will always protect us from reckless or criminal acts committed by our employees or agents. Allegations of violations of applicable international laws and regulations, including the FCPA and the Bribery Act, may result in internal, independent or government investigations. Violations of the FCPA and other international laws and regulations may lead to severe criminal or civil sanctions and could result in liabilities that have a material adverse effect on our business, financial condition, results of operations and cash flows.

Economic conditions and regulatory changes leading up to and following the United Kingdom's ("UK") likely exit from the European Union ("EU") could have a material adverse effect on our business, financial condition and results of operations.

We have business operations in both the UK and the broader EU. In June 2016, a majority of voters in the UK elected to withdraw from the EU in a national referendum, and the UK is currently negotiating the terms of its exit from the EU, which is scheduled for March 29, 2019. In November 2018, the UK and the EU agreed upon a draft Withdrawal Agreement that sets out the terms of the UK's departure, including commitments on citizen rights after its withdrawal, a financial settlement from the UK and a transition period from March 29, 2019 through December 31, 2020 to allow time for a future deal to be agreed upon. On January 15, 2019, the draft Withdrawal Agreement was rejected by the UK parliament, creating significant uncertainty regarding the terms and timing under which the UK will leave the EU. In addition, the UK referendum and withdrawal process have given rise to calls for the governments of other EU member states to consider withdrawal.

These developments, or the perception that any of them could occur, may have a material adverse effect on global economic conditions and the stability of global financial markets, and could significantly reduce global market liquidity and restrict the ability of key market participants to operate in certain financial markets. Asset valuations, currency exchange rates and credit ratings may be especially subject to increased market volatility. Lack of clarity about future UK laws and regulations as the UK determines which EU laws to replace or replicate in the course of its withdrawal, including financial laws and regulations, tax and free trade agreements, intellectual property rights, supply chain logistics, environmental, health and safety laws and regulations, immigration laws and employment laws, could decrease foreign direct investment in the UK, increase costs, depress economic activity and restrict our access to capital. If the UK and the EU are unable to negotiate acceptable withdrawal terms or if other EU member states pursue withdrawal, barrier-free access between the UK and other EU member states or among the European economic area overall could be diminished or eliminated. Any of these factors could have a direct or indirect impact on our business in the UK and EU, our customers and suppliers in the UK and EU and our business outside the UK and EU. Any of these factors could have a material adverse effect on our business, financial condition and results of operations and reduce the price of our common stock.

Our foreign operations present additional risks and uncertainties which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our foreign business operations create additional risks and uncertainties, including the following:

- Longer payment cycles;
- Difficulties in accounts receivable collection, including complexities in documenting letters of credit;
- Changes in regulatory requirements;
- Export restrictions, tariffs and other trade barriers;
- Difficulties in staffing and managing foreign operations;
- Seasonal reductions in business activity during the summer months in Europe and certain other parts of the world;
- Political or economic instability in the markets we serve;
- Potentially adverse tax consequences; and
- Cultural and legal differences impacting the conduct of business.

In addition, our contracts with foreign customers may include terms and reflect legal requirements that create additional risks. These include, among others, industrial cooperation agreements requiring specific in-country purchases, investments, manufacturing agreements or other financial obligations, known as offset requirements, and provide for significant penalties if we fail to meet such requirements. Our foreign customers may also require us to enter in letters of credit, performance or surety bonds, bank guarantees and/or other financial arrangements to secure our performance obligations. All or any of these factors have the potential to have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our insurance coverage may be inadequate to cover all significant risk exposures.

We are exposed to risks that are unique to the products and services we provide. While we believe that we maintain adequate insurance for certain risks, insurance cannot be obtained to protect against all risks and liabilities. It is therefore possible that our insurance coverage may not cover all claims or liabilities, and we may be forced to bear substantial unanticipated costs.

Business disruptions could seriously affect our sales and financial condition or increase our costs and expenses.

Our business may be impacted by disruptions including, but not limited to, threats to physical security, information technology attacks or failures, damaging weather or other acts of nature and pandemics or other public health crises. Any of these disruptions could affect our internal operations or services provided to customers, and could impact our sales, increase our expenses or adversely affect our reputation or our stock price. We have developed and are implementing business continuity plans for each of our businesses, in order to mitigate the effects disruptions may have on our financial results.

Our business could be impacted as a result of actions by activist shareholders or others.

We may be subject, from time to time, to legal and business challenges in the operation of our company due to actions instituted by activist shareholders or others. Responding to such actions could be costly and time-consuming, may not align with our business strategies and could divert the attention of our Board of Directors and senior management from the pursuit of our business strategies. Perceived uncertainties as to our future direction as a result of shareholder activism may lead to the perception of a change in the direction of the business or other instability and may make it more difficult to attract and retain qualified personnel and business partners and may affect our relationships with vendors, customers and other third parties.

Our revenue, cash flows and quarterly results may fluctuate, which could adversely affect our stock price.

We may in the future experience significant fluctuations in our quarterly operating results attributable to a variety of factors. Such factors include but are not limited to:

- Changes in demand for our products;
- Introduction, enhancement or announcement of products by us or our competitors;
- Market acceptance of our new products;
- The growth rates of certain market segments in which we compete;
- Size, timing and shipment terms of significant orders;
- Difficulties with our technical programs;
- Budgeting cycles of customers;
- Pricing pressures from customers;
- Customer advances;
- Longer payment terms required by our customers;

- Mix of distribution channels;
- Mix of products and services sold;
- Mix of domestic and international revenues;
- Fluctuations in currency exchange rates;
- Changes in the level of operating expenses;
- Changes in our sales incentive plans;
- Changes in tax laws in the jurisdictions in which we conduct business;
- Inventory obsolescence;
- Accrual of contract losses;
- Fluctuations in oil and utility costs;
- Health care reform;
- Completion or announcement of acquisitions; and
- General economic conditions in regions in which we conduct business.

Most of our expenses are relatively fixed in the short-term, including costs of personnel and facilities, and are not easily reduced. Thus, an unexpected reduction in our revenue, or failure to achieve an anticipated rate of growth, could have a material adverse effect on our profitability. If our operating results do not meet the expectations of investors, our stock price may decline.

FORWARD-LOOKING STATEMENTS

This report contains "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements also may be included in other publicly available documents issued by the Company and in oral statements made by our officers and representatives from time to time. These forward-looking statements are intended to provide management's current expectations or plans for our future operating and financial performance, based on assumptions currently believed to be valid. They can be identified by the use of words such as "anticipate," "intend," "plan," "goal," "seek," "believe," "project," "estimate," "expect," "strategy," "future," "likely," "may," "should," "would," "could," "will" and other words of similar meaning in connection with a discussion of future operating or financial performance. Examples of forward looking statements include, among others, statements relating to future sales, earnings, cash flows, results of operations, uses of cash and other measures of financial performance.

Because forward-looking statements relate to the future, they are subject to inherent risks, uncertainties and other factors that may cause the Company's actual results and financial condition to differ materially from those expressed or implied in the forward-looking statements. Such risks, uncertainties and other factors include, among others: (i) changes in domestic and foreign economic and competitive conditions in markets served by the Company, particularly the defense, commercial aviation and industrial production markets; (ii) changes in government and customer priorities and requirements (including cost-cutting initiatives, government and customer shut-downs, the potential deferral of awards, terminations or reductions of expenditures to respond to the priorities of Congress and the Administration, or budgetary cuts resulting from Congressional actions or automatic sequestration); (iii) changes in geopolitical conditions in countries where the Company does or intends to do business; (iv) the successful conclusion of competitions for government programs (including new, follow-on and successor programs) and thereafter successful contract negotiations with government authorities (both foreign and domestic) for the terms and conditions of the programs; (v) the timely receipt of any necessary export approvals and/or other licenses or authorizations from the U.S. Government; (vi) timely satisfaction or fulfillment of material contractual conditions precedents in customer purchase orders, contracts, or similar arrangements; (vii) the existence of standard government contract provisions permitting renegotiation of terms and termination for the convenience of the government; (viii) the successful resolution of government inquiries or investigations relating to our businesses and programs; (ix) risks and uncertainties associated with the successful implementation and ramp up of significant new programs, including the ability to manufacture the products to the detailed specifications required and recover start-up costs and other investments in the programs; (x) potential difficulties associated with variable acceptance test results, given sensitive production materials and extreme test parameters; (xi) the receipt and successful execution of production orders under the Company's existing U.S. government JPF contract, including the exercise of all contract options and receipt of orders from allied militaries, but excluding any next generation programmable fuze programs, as all have been assumed in connection with goodwill impairment evaluations; (xii) the continued support of the existing K-MAX® helicopter fleet, including sale of existing K-MAX® spare parts inventory and the receipt of orders for new aircraft sufficient to recover our investments in the K-MAX® production line; (xiii) the accuracy of current cost estimates associated with environmental remediation activities; (xiv) the profitable integration of acquired businesses into the Company's operations; (xv) the ability to implement our ERP systems in a cost-effective and efficient manner, limiting disruption to our business, and allowing us to capture their planned benefits while maintaining an adequate internal control environment; (xvi) the ability to recover from cyber-based or other security attacks, information technology failures or other disruptions; (xvii) changes in supplier sales or vendor incentive policies; (xviii) the ability of our suppliers to satisfy their performance obligations; (xix) the effects of price increases or decreases; (xx) the effects of pension regulations, pension plan assumptions, pension plan asset performance, future contributions and the pension freeze, including the ultimate determination of the U.S. Government's share of any pension curtailment adjustment calculated in accordance with CAS 413; (xxi) future levels of indebtedness and capital expenditures; (xxii) the continued availability of raw materials and other commodities in adequate supplies and the effect of increased costs for such items; (xxiii) the effects of currency exchange rates and foreign competition on future operations; (xxiv) changes in laws and regulations, taxes, interest rates, inflation rates and general business conditions; (xxv) the effects, if any, of the UK's exit from the EU; (xxvi) future repurchases and/or issuances of common stock; (xxvii) the occurrence of unanticipated restructuring costs or the failure to realize anticipated savings or benefits from past or future expense reduction actions; (xxviii) the ability to recruit and retain skilled employees; and (xxix) other risks and uncertainties set forth herein.

Any forward-looking information provided in this report should be considered with these factors in mind. We assume no obligation to update any forward-looking statements contained in this report.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our facilities are generally suitable for, and adequate to serve, their intended uses. At December 31, 2018, we occupied major facilities at the following principal locations:

Segment	Location	Property Type [1]
Aerospace	Jacksonville, Florida	Leased - Manufacturing & Office
	Chihuahua, Mexico	Leased - Manufacturing & Office
	Rimpar, Germany	Owned - Manufacturing & Office
	Prachatice, Czech Republic	Owned - Assembly & Office
	Wichita, Kansas	Leased - Manufacturing & Office
	Darwen, Lancashire, United Kingdom	Leased - Manufacturing & Office
	Orlando, Florida	Owned - Manufacturing & Office
	Höchstadt, Germany	Owned - Manufacturing & Office
	Middletown, Connecticut	Owned - Manufacturing & Office
	Bloomfield, Connecticut	Owned - Manufacturing, Office & Service Center
	Bennington, Vermont	Owned - Manufacturing & Office
	Gilbert, Arizona	Leased - Office & Service Center
Distribution	Bloomfield, Connecticut	Owned - Office
	Ontario, California	Leased - Distribution Center & Office
	Latham, New York	Leased - Distribution Center & Office
	Savannah, Georgia	Leased - Distribution Center & Office
	Salt Lake City, Utah	Leased - Distribution Center & Office
	Louisville, Kentucky	Leased - Distribution Center & Office
	Gurabo, Puerto Rico	Leased - Distribution Center & Office
	Bolingbrook, Illinois	Leased - Office & Branch
	Rochester, New York	Leased - Office & Branch
	Akron, Ohio	Leased - Office
	Teterboro, New Jersey	Leased - Office & Branch
	Plano, Texas	Leased - Office & Warehouse
	Franklin, Massachusetts	Leased - Office & Warehouse
Corporate	Bloomfield, Connecticut	Owned - Office & Information Technology Back-Up Data Center

	Square Feet
Distribution [2]	2,263,438
Aerospace	2,043,938
Corporate [3]	103,041
Total	4,410,417

(1) Owned facilities are unencumbered.

(2) The Distribution segment also has approximately 220 branches located across the United States and in Puerto Rico, generally operating in leased facilities.

(3) We occupy a 40,000 square foot corporate headquarters building, 38,000 square foot mixed use building and 8,000 square foot data center in Bloomfield, Connecticut.

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ITEM 3. LEGAL PROCEEDINGS

General

From time to time, as a normal incident of the nature and kinds of businesses in which the Company and its subsidiaries are, and were, engaged, various claims or charges are asserted and legal proceedings are commenced by or against the Company and/or one or more of its subsidiaries. Claimed amounts may be substantial but may not bear any reasonable relationship to the merits of the claim or the extent of any real risk of court or arbitral awards. We record accruals related to those matters for which we consider a loss to be both probable and reasonably estimable. Gain contingencies, if any, are not recognized until they are realized. Legal costs are generally expensed when incurred.

We evaluate, on a quarterly basis, developments in legal proceedings that could affect the amount of any accrual and developments that would make a loss contingency both probable and reasonably estimable. Our loss contingencies are subject to substantial uncertainties, however, including for each such contingency the following, among other factors: (i) the procedural status of the case; (ii) whether the case has or may be certified as a class action suit; (iii) the outcome of preliminary motions; (iv) the impact of discovery; (v) whether there are significant factual issues to be determined or resolved; (vi) whether the proceedings involve a large number of parties and/or claims in multiple jurisdictions or jurisdictions in which the relevant laws are complex or unclear; (vii) the extent of potential damages, which are often unspecified or indeterminate; and (viii) the status of settlement discussions, if any, and the settlement postures of the parties. Because of these uncertainties, management has determined that, except as otherwise noted below, the amount of loss or range of loss that is reasonably possible in respect of each matter described below (including any reasonably possible losses in excess of amounts already accrued), is not reasonably estimable.

While it is not possible to predict the outcome of these matters with certainty, based upon available information, management believes that all settlements, arbitration awards and final judgments, if any, which are considered probable of being rendered against us in legal proceedings and that can be reasonably estimated are accrued for at December 31, 2018. Despite this analysis, there can be no assurance that the final outcome of these matters will not have a material adverse effect on our business, financial condition, results of operations or cash flows.

Except as set forth below, as of December 31, 2018, neither the Company nor any of its subsidiaries is a party, nor is any of its or their property subject, to any material pending legal proceedings, other than ordinary routine litigation incidental to the business of the Company and its subsidiaries. Additional information relating to certain of these matters is set forth in Note 17, Commitments and Contingencies, and Note 11, Environmental Costs, of the Notes to Consolidated Financial Statements, included in Item 8, Financial Statements and Supplementary Data, of this Annual Report on Form 10-K.

Environmental Matters

The Company and its subsidiaries are subject to numerous U.S. Federal, state and international environmental laws and regulatory requirements and are involved from time to time in investigations or litigation of various potential environmental issues concerning activities at our facilities or former facilities or remediation as a result of past activities (including past activities of companies we have acquired). From time to time, we receive notices from the U.S. Environmental Protection Agency or equivalent state or international environmental agencies that we are a potentially responsible party under the Comprehensive Environmental Response, Compensation and Liability Act (commonly known as the "Superfund Act") and/or equivalent laws. Such notices assert potential liability for cleanup costs at various sites, which may include sites owned by us, sites we previously owned and treatment or disposal sites not owned by us, allegedly containing hazardous substances attributable to us from past operations. While it is not possible to predict the outcome of these proceedings, in the opinion of management, any payments we may be required to make as a result of all such claims in existence at December 31, 2018, will not have a material adverse effect on our business, financial condition and results of operations or cash flows. Additional information relating to certain of these matters is set forth in Note 17, Commitments and Contingencies, and Note 11, Environmental Costs, of the Notes to Consolidated Financial Statements, included in Item 8, Financial Statements and Supplementary Data, of this Annual Report on Form 10-K.

Asbestos Litigation

Like many other industrial companies, the Company and/or one of its subsidiaries may be named as a defendant in lawsuits alleging personal injury as a result of exposure to asbestos integrated into certain products sold or distributed by the Company and/or the named subsidiary. A substantial majority of these asbestos-related claims have been covered by insurance or other forms of indemnity or have been dismissed without payment. The rest have been resolved for amounts that are not material to the Company, either individually or in the aggregate. Based on information currently available, we do not believe that the resolution of any currently pending asbestos-related matters will have a material adverse effect on our business, financial condition, results of operations or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Information concerning mine safety violations required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act") and Item 104 of Regulation S-K was not required for this Annual Report on Form 10-K as there were no reportable violations during 2018.

PART II

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

MARKET, DIVIDEND AND SHAREHOLDER INFORMATION

Our Common Stock is traded on the New York Stock Exchange under the symbol "KAMN". As of January 25, 2019, there were 3,089 registered holders of our Common Stock. Holders of the Company's Common Stock are eligible to participate in the Computershare Shareowner Services program, which offers a variety of services including dividend reinvestment. A booklet describing the program may be obtained by contacting Computershare at (800) 522-6645 or via the web at www.cpushareownerservices.com.

ISSUER PURCHASES OF EQUITY SECURITIES

The following table provides information about purchases of Common Stock by the Company during the three months ended December 31, 2018:

Period	Total Number of Shares Purchased (a)	Average Price Paid per Share	Total Number of Shares Purchased as Part of a Publicly Announced Plan (b)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plan (in thousands)
September 29, 2018 – October 26, 2018	26,617	$ 63.81	26,000	$ 51,278
October 27, 2018 – November 23, 2018	51,265	$ 58.75	50,507	$ 48,311
November 24, 2018 – December 31, 2018	46,615	$ 55.98	46,500	$ 45,707
Total	124,497		123,007	

(a) During the quarter the Company purchased 1,490 shares in connection with employee tax withholding obligations as permitted by our equity compensation plans, which are SEC Rule 16b-3 qualified compensation plans. These are not purchases under our publicly announced program.
(b) On April 29, 2015, the Company announced that its Board of Directors approved a $100.0 million share repurchase program ("2015 Share Repurchase Program"). This program will expire December 31, 2019.

PERFORMANCE GRAPH

Following is a comparison of our total shareholder return for the period 2013 – 2018 compared to the S&P 600 Small Cap Index and the Russell 2000 Small Cap Index. The performance graph does not include a published industry or line-of-business index or peer group of similar issuers because during the performance period the Company was conducting operations in diverse lines of business and we do not believe a meaningful industry index or peer group can be reasonably identified. Accordingly, as permitted by regulation, the graph includes the S&P 600 Small Cap Index and the Russell 2000 Small Cap Index, both of which are comprised of issuers with market capitalizations generally similar to that of the Company.

	2013	2014	2015	2016	2017	2018
Kaman Corporation	100.00	102.51	106.22	129.47	158.09	152.63
S&P Small Cap 600	100.00	105.76	103.67	131.20	148.56	135.96
Russell 2000	100.00	104.89	100.26	121.63	139.44	124.09

ITEM 6. SELECTED FINANCIAL DATA

FIVE-YEAR SELECTED FINANCIAL DATA
(in thousands, except per share amounts, shareholders and employees)

	2018 [1,6,7]	2017 [2,6,7]	2016 [3,6,7]	2015 [4,6,7]	2014 [5,6,7]
OPERATIONS					
Net sales from continuing operations	$1,875,425	$1,805,909	$1,808,376	$1,775,125	$1,794,962
Operating income from continuing operations	83,064	111,119	102,774	98,416	102,932
Earnings from continuing operations before income taxes	75,237	94,378	89,704	87,989	96,502
Income tax expense	21,068	44,552	30,850	27,551	30,722
Earnings from continuing operations	54,169	49,826	58,854	60,438	65,780
Loss from discontinued operations, net of taxes	—	—	—	—	(2,924)
Loss on disposal of discontinued operations, net of taxes	—	—	—	—	(4,984)
Net earnings	$54,169	$49,826	$58,854	$60,438	$57,872
FINANCIAL POSITION					
Current assets	$773,105	$747,869	$698,553	$676,035	$662,256
Current liabilities	298,476	246,299	353,886	236,689	221,724
Working capital	474,629	501,570	344,667	439,346	440,532
Property, plant and equipment, net	184,224	185,452	176,521	175,586	147,825
Total assets	1,460,313	1,455,452	1,426,286	1,439,611	1,199,281
Long-term debt, excluding current portion	284,256	391,651	296,598	434,227	269,308
Shareholders' equity	633,157	635,656	565,787	543,077	517,665
PER SHARE AMOUNTS					
Basic earnings per share from continuing operations	$1.94	$1.80	$2.17	$2.22	$2.43
Basic earnings (loss) per share from discontinued operations	—	—	—	—	(0.11)
Basic earnings (loss) per share from disposal of discontinued operations	—	—	—	—	(0.18)
Basic earnings per share	$1.94	$1.80	$2.17	$2.22	$2.14
Diluted earnings per share from continuing operations	$1.92	$1.75	$2.10	$2.17	$2.37
Diluted earnings (loss) per share from discontinued operations	—	—	—	—	(0.11)
Diluted earnings (loss) per share from disposal of discontinued operations	—	—	—	—	(0.18)
Diluted earnings per share	$1.92	$1.75	$2.10	$2.17	$2.08
Dividends declared	$0.80	$0.80	$0.72	$0.72	$0.64
Shareholders' equity	22.72	22.85	20.87	20.09	19.08
AVERAGE SHARES OUTSTANDING					
Basic	27,945	27,611	27,107	27,177	27,053
Diluted	28,223	28,418	28,072	27,868	27,777
GENERAL STATISTICS					
Registered shareholders	3,085	3,142	3,261	3,402	3,532
Employees	5,065	5,297	5,265	5,258	4,797

(See Footnotes below)

(Footnotes to Five-Year Selected Financial Data above)

Included within certain annual results are a variety of unusual or significant items that may affect comparability. The most significant of such items are described below.

1. Results from 2018 include a $10.0 million write-off of other intangibles associated with the impairment for a certain asset group at our U.K. business, $6.0 million in expense related to restructuring activities at Aerospace, a $5.7 million loss on the sale of our U.K. Tooling business, $3.4 million in costs associated with corporate development activities, $3.0 million in costs incurred for employee-tax related matters at Aerospace, a $1.5 million gain on the sale of land, $1.4 million in costs associated with the termination of certain distributor agreements and separation costs for certain employees not covered by the restructuring activities at Aerospace, a $0.7 million loss on the sale of substantially all the assets and liabilities of our Engineering Services business and $0.6 million in separation costs for certain employees at Distribution.

2. Results for 2017 include $9.7 million in tax expense associated with the revaluation of the Company's existing U.S. deferred tax assets resulting from Tax Reform, $2.7 million in expense related to restructuring activities at the Aerospace segment and $2.8 million in separation costs associated with two senior executives. Additionally, we issued convertible senior unsecured notes in the aggregate principal amount of $200.0 million ("2024 Notes"). The Company used the proceeds from the issuance of the 2024 Notes, along with cash received in connection with the termination of existing convertible note hedge transactions, to repurchase a portion of the existing convertible senior unsecured notes due in November 2017 ("2017 Notes") at a cost of $106.7 million, purchase a capped call related to the 2024 Notes and pay down a portion of our revolving credit facility. The remaining portion of the 2017 Notes was settled in November 2017. The Company incurred $7.4 million of debt issuance costs in connection with the issuance of the 2024 Notes. Of the total amount, $0.7 million was recorded as an offset to additional paid-in capital and the remaining balance of $6.7 million was recorded as a contra-debt balance and is being amortized over the term of the 2024 Notes.

3. Results for 2016 include $5.1 million of acquisition transaction and integration costs related to our 2015 acquisitions, $2.5 million of severance costs at our Aerospace segment, of which $1.1 million is included in acquisition transaction and integration costs, and $1.0 million of restructuring and severance costs at our Distribution segment. Additionally, the carrying amount of the 2017 Notes was reclassified to current liabilities, as these 2017 Notes were convertible through April 3, 2017. Upon closure of the conversion period, the Notes remained in current liabilities due to their scheduled maturity.

4. Results for 2015 include $5.1 million in expense related to the acquisitions at both the Aerospace and Distribution segments, $4.0 million in expense associated with the resolution of the matters related to our AH-1Z program, $3.0 million of expenses related to foreign currency transactions associated with the purchase of GRW Bearing GmbH ("GRW") and $2.4 million of expenses associated with restructuring and severance costs at our Distribution segment.

5. Results for 2014 include the sale of the Distribution segment's Mexican operations for $9.6 million on December 19, 2014. The net loss of $5.3 million resulting from the sale is included in the loss on disposal of discontinued operations for 2014. Additionally, we incurred $2.2 million of costs associated with the sale of our Moosup facility.
6. On January 1, 2018, we adopted new revenue recognition guidance ("ASC 606") using the modified retrospective method. As a result, we applied the new revenue recognition guidance only to contracts that were not completed as of January 1, 2018; therefore, current period results are presented under the new revenue recognition guidance and prior period results are presented in accordance with previous revenue recognition guidance ("ASC 605"). The adoption of this standard resulted in an additional $64.3 million in net sales and $17.0 million in operating income in 2018, which otherwise would not have been recorded in 2018 under previous guidance. See Note 1, Summary of Significant Accounting Policies, and Note 2, Accounting Changes in the Notes to Consolidated Financial

Statements included in this Form 10-K for further details.

7. On January 1, 2018, we adopted the new accounting standard that resulted in the net periodic pension cost and net post retirement cost other than service costs to no longer be presented in cost of sales and selling, general and administrative expenses, but instead be presented within non-service pension and post retirement benefit cost. This ASU was applied retrospectively for the presentation of the service cost component and the other components of net benefit cost in the income statement and prospectively, on and after the effective date, for the capitalization of the service cost component and the other components of net benefit cost in assets. See Note 1, Summary of Significant Accounting Policies, and Note 2, Accounting Changes in the Notes to Consolidated Financial Statements included in this Form 10-K for further details.

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

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is intended to provide readers of our consolidated financial statements with the perspectives of management. MD&A presents in narrative form information regarding our financial condition, results of operations, liquidity and certain other factors that may affect our future results. This should allow the readers of this report to obtain a comprehensive understanding of our businesses, strategies, current trends and future prospects. MD&A should be read in conjunction with the Consolidated Financial Statements and related Notes included in this Form 10-K.

OVERVIEW OF BUSINESS

Kaman Corporation conducts business through two business segments:

- The Distribution segment is a leading power transmission, automation and fluid power industrial distributor with operations throughout the United States. The segment provides electro-mechanical products, bearings, power transmission, motion control and electrical and fluid power components, along with engineered integrated solutions for our customers' most challenging applications, serving a broad spectrum of industrial markets including both MRO and OEM customers.
- The Aerospace segment produces and markets proprietary aircraft bearings and components; super precision, miniature ball bearings for the medical, industrial and aerospace markets; complex metallic and composite aerostructures for commercial, military and general aviation fixed and rotary wing aircraft; and safe and arming solutions for missile and bomb systems for the U.S. and allied militaries. The segment also markets the design and supply of aftermarket parts to businesses performing MRO in aerospace markets; performs helicopter subcontract work; restores, modifies and supports our SH-2G Super Seasprite maritime helicopters; and manufactures and supports our K-MAX® manned and unmanned medium-to-heavy lift helicopters.

Company financial performance

- Net sales increased 3.8% compared to the prior year driven by an increase in net sales at Distribution and a less significant increase in net sales at Aerospace. Adoption of ASC 606 had a favorable impact of 3.5% on net sales in 2018.
- Net earnings increased 8.7% compared to the prior year. This increase reflects the benefits realized from the Tax Cut and Jobs Act ("Tax Reform"), partially offset by the $10.0 million other intangible assets impairment charge incurred in the third quarter of 2018.
- Diluted earnings per share increased to $1.92 in 2018 compared to $1.75 in the prior year.
- Cash flows provided by operating activities were $162.4 million for 2018, an increase of $82.5 million when compared to the prior year. The increase in cash flows provided by operating activities was largely driven by advance payments received in connection with a Joint Programmable Fuze ("JPF") direct commercial sales ("DCS") contract.
- Total backlog increased 32.9% to $986.1 million, mostly driven by JPF orders.

Recent events

- In the fourth quarter of 2018, our Aerospace segment received three additional orders of K-MAX® helicopters from both new and existing customers. Due to the continued demand and interest in the capabilities of the K-MAX®, our Aerospace segment announced that we will continue production of the medium-lift utility helicopter into 2020 at a minimum.
- In December 2018, our Aerospace segment sold its U.K. Tooling business to better position the Company for increased profitability. This sale resulted in a loss of $5.7 million in 2018.
- During 2018, our Aerospace segment received two orders under Option 14 of its JPF contract with the U.S. Air Force ("USAF") with a total value of approximately $121.4 million.

- In September 2018, our Aerospace segment was awarded a DCS contract for our JPF with an expected total value of $48.6 million.
- During 2018, we contributed $30.0 million to the pension plan. The Company had not made annual contributions to the pension plan in excess of $10.0 million since 2010.
- In September 2018, our Aerospace segment recorded a $10.0 million impairment charge on its customer lists/ relationships of a certain asset group within its U.K. business.
- In July 2018, our Aerospace segment entered into an agreement with Rainier Heli International Inc., under which Rainier will offer K-MAX® leasing solutions to customers.

- In May 2018, the Company donated a refurbished SH-2F Seasprite helicopter to the National Naval Aviation Museum in Pensacola, FL.
- In April 2018, our Aerospace segment entered into a new contract with Bell Helicopter to manufacture sheet metal details and subassemblies for the AH-1Z attack helicopter. The expected total value of the contract is approximately $25.6 million annually with deliveries anticipated in 2019 and 2020.
- In April 2018, the Company announced its plan to pay a bonus of $1,000 to approximately 2,400 eligible employees as a way of sharing benefits from Tax Reform.
- In April 2018, the Company celebrated a collaboration agreement with Airbus, who designated the Company as a strategic supplier.
- On January 31, 2018, our Aerospace segment announced it had been awarded a DCS order for the procurement of the JPF with an expected total value of approximately $324.0 million. Delivery of these fuzes is anticipated to begin in 2019 and continue through 2022.
- On January 16, 2018, our Aerospace segment announced it had received a contract modification from the USAF under Option 13 of its JPF contract with a value of approximately $17.0 million. This modification increased the total value of Option 13 to more than $102.0 million. Delivery of these fuzes began in 2018 and will continue into 2019.

RESULTS OF OPERATIONS

Consolidated Results

On January 1, 2018, we adopted the new accounting standard that resulted in the net periodic pension cost and net post retirement cost other than service costs to no longer be presented in cost of sales and selling, general and administrative expenses, but instead be presented within non-service pension and post retirement benefit cost. See Note 1, Summary of Significant Accounting Policies, and Note 2, Accounting Changes, in the Notes to Consolidated Financial Statements included in this Form 10-K for further details.

Also on January 1, 2018, we adopted new revenue recognition guidance ("ASC 606") using the modified retrospective method. As a result, we applied the new revenue recognition guidance only to contracts that were not completed as of January 1, 2018; therefore, current period results are presented under the new revenue recognition guidance and prior period results are presented in accordance with previous revenue recognition guidance ("ASC 605"). See Note 1, Summary of Significant Accounting Policies, and Note 2, Accounting Changes, in the Notes to Consolidated Financial Statements included in this Form 10-K for further details.

The method of revenue recognition at the Distribution segment remained substantially the same. Under the new revenue recognition guidance Distribution will generally recognize revenue using the point-in-time method, at the time control of products is transferred to our customers.

In the prior period, the majority of our long-term contracts in the Aerospace segment were accounted for under the percentage-of-completion method using units-of-delivery as a measurement basis, generally recognizing revenue upon delivery to our customer. Revenue recognition under many of these contracts has moved to an over time method under the new revenue recognition guidance, using input costs as the basis for recognizing progress to completion. Under this method, revenue is generally recognized when costs are incurred as work progresses on a program prior to delivery to the customer. The two programs most significantly impacted by the adoption of the new revenue recognition guidance were our JPF program with the U.S. Government ("USG") and our K-MAX® program. Revenue recognition for our JPF program with the USG moved from percentage-of-completion using units-of-delivery to an over time method using input costs as the basis for recognizing progress to completion. Conversely, revenue recognition for our K-MAX® program moved from percentage-of-completion on a cost-to-cost basis to a point-in-time method with revenue recognized at the time control is transferred to our customer.

Net Sales

	2018	2017	2016
In thousands			
Distribution	$1,139,431	$1,080,965	$1,106,322
Aerospace	735,994	724,944	702,054
Total	$1,875,425	$1,805,909	$1,808,376
$ change	69,516	(2,467)	33,251
% change	3.8%	(0.1)%	1.9%

The following table details the components of ASC 606 changes as a percentage of consolidated net sales as compared to the corresponding period in 2017:

	2018
Increase in sales associated with ASC 606	3.5%
Increase in sales absent the adoption impact of ASC 606	0.3%
% change in net sales	3.8%

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The following table details the components of the above changes as a percentage of consolidated net sales:

	2018	2017	2016
Organic Sales:			
Distribution	3.2%	(1.4)%	(4.3)%
Aerospace	0.6%	1.3 %	2.3 %
Total Organic Sales	3.8%	(0.1)%	(2.0)%
Acquisition Sales:			
Distribution	— %	— %	0.3 %
Aerospace	— %	— %	3.6 %
Total Acquisition Sales	— %	— %	3.9 %
% change in net sales	3.8%	(0.1)%	1.9 %

Net sales for 2018 increased when compared to 2017. This was a result of higher sales at our Distribution segment and an increase in net sales of $64.3 million resulting from the adoption of the new revenue recognition guidance, primarily at Aerospace. These increases were partially offset by a decrease in net sales at our Aerospace segment absent the adoption impact of ASC 606. Under the new guidance, revenue recognition will generally be accelerated ahead of deliveries for certain aerospace programs and distribution contracts. Foreign currency exchange rates relative to the U.S. dollar had a favorable impact of $5.0 million on net sales.

Net sales for 2017 remained relatively flat when compared to 2016. This was a result of lower sales at our Distribution segment, mostly offset by higher sales at our Aerospace segment. The impact of foreign currency exchange rates relative to the U.S. dollar was not material.

See Segment Results of Operations and Financial Condition below for further discussion of segment net sales.

Gross Profit

	2018	2017	2016
In thousands			
Gross profit	$550,037	$545,591	$547,521
$ change	4,446	(1,930)	33,172
% change	0.8 %	(0.4)%	6.4 %
% of net sales	29.3 %	30.2 %	30.3 %

Gross profit for 2018 remained relatively flat when compared to 2017. This was attributable to higher gross profit of $18.7 million resulting from the adoption of the new revenue recognition guidance, primarily at Aerospace, and higher gross profit at the Distribution segment. These increases were mostly offset by a decrease in gross profit of $24.3 million absent the adoption of the new revenue recognition guidance at our Aerospace segment. This decrease was primarily attributable to lower direct commercial sales of our JPF to foreign militaries, lower sales and associated gross profit on the K-MAX® program, and decreases in gross profit under the AH-1Z program and our composite structures products from foreign operations.

Gross profit for 2017 remained relatively flat when compared to 2016. Of the change noted above, the Distribution segment represented 1.6% of the decrease in consolidated gross profit, mostly offset by an increase in consolidated gross profit of 1.3% associated with higher gross profit at our Aerospace segment. The decrease in gross profit at our Distribution segment was primarily attributable to lower sales under our bearings and power transmission and automation, control and energy product lines. The increase in gross profit at our Aerospace segment was primarily due to higher sales and associated gross profit under our commercial bearings products, the AH-1Z program and our SH-2G program with Peru. Gross profit as a percentage of sales for 2017 remained relatively flat when compared to

2016.

Selling, General & Administrative Expenses (S,G&A)

	2018	2017	2016
In thousands			
S,G&A	$444,904	$432,067	$443,704
$ change	12,837	(11,637)	28,939
% change	3.0 %	(2.6)%	7.0 %
% of net sales	23.7 %	23.9 %	24.5 %

S,G&A increased for the year ended December 31, 2018, as compared to 2017. The following table details the components of this change:

	2018	2017	2016
Organic S,G&A:			
Distribution	2.4%	(4.2)%	0.8 %
Aerospace	0.4%	(0.1)%	2.5 %
Corporate	0.2%	1.7 %	(1.2)%
Total Organic S,G&A	3.0%	(2.6)%	2.1 %
Acquisition S,G&A:			
Distribution	— %	— %	0.3 %
Aerospace	— %	— %	4.6 %
Total Acquisition S,G&A	— %	— %	4.9 %
% change in S,G&A	3.0%	(2.6)%	7.0 %

The increase in S,G&A expenses for 2018 as compared to 2017 was attributable to higher expenses at both our Distribution and Aerospace segments and an increase in corporate expenses. The increase in expenses at the Distribution segment was mainly driven by higher employee and employee-related costs, including an increase in group health costs and $1.4 million in one-time employee incentives. S,G&A expenses at our Aerospace segment increased when compared to prior year, primarily due to $3.0 million in costs incurred for employee-tax related matters. The increase in corporate expenses was primarily attributable to $3.4 million in corporate development activities, which includes costs associated with the due diligence for an acquisition we elected not to complete, partially offset by the absence of $2.8 million in separation costs associated with senior executives incurred in the prior year.

S,G&A expenses decreased for 2017 as compared to 2016 primarily due to lower expenses at our Distribution segment, partially offset by an increase in corporate expenses. The decrease in expenses at our Distribution segment was primarily related to lower expenses of $10.5 million associated with our productivity and efficiency initiatives and lower salary and benefit expenses. These decreases were partially offset by an increase in corporate expenses, resulting from higher employee and employee-related costs and $2.8 million in separation costs associated with senior executives, partially offset by lower consulting expenses. S,G&A expenses at our Aerospace segment remained relatively flat when compared to 2016. This was a result of higher salary and wage expenses, mostly offset by lower costs associated with the sale of government contract program inventory (see segment discussion below for additional information).

Other Intangible Assets Impairment

	2018	2017	2016
In thousands			
Other intangible assets impairment	$10,039	$ —	$ —

During the third quarter of 2018, we identified a triggering event for possible impairment of long-lived intangible assets at a certain asset group within the Aerospace segment's U.K. business based on an analysis of historical performance, the current forecast for the remainder of the year and the loss of future orders from one of its customers. We performed a recoverability test by comparing the undiscounted cash flows of the asset group to its carrying value, and the estimated future cash flows of the

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business did not exceed the carrying value of the assets. Based on these results, we calculated the fair value of the asset group using an income approach, which resulted in an impairment charge of $10.0 million, or the remaining balance of the customer lists/relationships at a certain asset group within the U.K. business. This charge has been included in the operating results of the Aerospace segment.

Restructuring Costs

	2018	2017	2016
In thousands			
Restructuring costs	$8,008	$2,661	$1,032

During the third quarter 2017, we announced restructuring activities at certain businesses within our Aerospace segment to support the ongoing effort of improving capacity utilization and operating efficiency to better position the Company for increased profitability and growth. Such actions included workforce reductions and the consolidation of operations, which we expect to continue through the planned completion in 2019. In the years ended December 31, 2018 and 2017, we recorded $6.0 million and $2.7 million, respectively, in costs associated with the restructuring activities. In addition to these costs, in 2018, the Aerospace segment incurred $1.4 million in other non-related restructuring costs associated with the termination of certain distributor agreements and separation costs associated with certain employees not included in restructuring activities discussed above. The Distribution segment incurred $0.6 million in separation costs for certain employees in 2018.

During 2016, we offered a voluntary retirement program to certain employees of its Distribution segment. In addition to the voluntary retirement program, the Distribution segment incurred $0.7 million of severance expense in 2016.

Loss on Sale of Business

	2018	2017	2016
In thousands			
Loss on sale of business	$5,722	$ —	$ —

During the fourth quarter of 2018, we sold our U.K. Tooling business to better position the Company for increased profitability. This sale did not qualify for the reporting of discontinued operations within the consolidated financial statements. We incurred a loss of $5.7 million associated with the sale. Of this amount, $1.7 million relates to the foreign currency translation reclassified from accumulated other comprehensive income (loss) to net income.

Operating Income

	2018	2017	2016
In thousands			
Operating income	$83,064	$111,119	$102,774
$ change	(28,055)	8,345	4,358
% change	(25.2)%	8.1 %	4.4 %
% of net sales	4.4 %	6.2 %	5.7 %

The decrease in operating income for 2018 as compared to 2017 was primarily attributable to lower operating income at our Aerospace segment, driven by the $10.0 million other intangible assets impairment at our U.K business, the loss incurred for the sale of the U.K. Tooling business, higher restructuring costs, the costs incurred for employee-tax related matters and the loss on the sale of substantially all of the assets and liabilities of our Engineering Services business, and higher corporate expenses, as discussed above. These changes were partially offset by an increase in operating income of $17.0 million resulting from the adoption of the new revenue recognition guidance, primarily at Aerospace. The increase in operating income for 2017 as compared to 2016 was primarily due to higher operating income at both our Distribution and Aerospace segments, partially offset by higher corporate expenses, as discussed above. See Segment Results of Operations and Financial Condition below for further discussion of segment operating income.

Interest Expense, Net

	2018	2017	2016
In thousands			
Interest expense, net	$20,097	$20,581	$15,747

Interest expense, net generally consists of interest charged on our Credit Agreement, which includes a revolving credit facility and a term loan facility, and our convertible notes and the amortization of debt issuance costs, offset by interest income. The decrease in interest expense, net for 2018 as compared to 2017 was primarily due to lower average borrowings, partially offset by an increase in letter of credit fees. At December 31, 2018, the interest rate for outstanding amounts on both the revolving credit facility and term loan agreement was 3.74% compared to 2.84% at December 31, 2017.

The increase in interest expense, net for 2017 as compared to 2016 was primarily due to higher interest expense under our convertible notes and a higher interest rate for outstanding amounts under the Credit Agreement. At December 31, 2017, the interest rate for outstanding amounts on both the revolving credit facility and term loan agreement was 2.84% compared to 2.19% at December 31, 2016. Additionally, contributing to the increase in interest expense, net was the write-off of unamortized debt issuance costs and the unamortized debt discount associated with the repurchase of a portion of our 2017 Notes, for $0.3 million and $1.0 million, respectively. Partially offsetting these increases to interest expense, net were lower average borrowings under the credit facility compared to 2016.

Effective Income Tax Rate

	2018	2017	2016
Effective income tax rate	28.0%	47.2%	34.4%

The effective tax rate represents the combined federal, state and foreign tax effects attributable to pretax earnings for the year. The decrease in the effective tax rate for 2018 compared to 2017 was primarily due to the rate reduction resulting from Tax Reform, partially offset by foreign losses for which no tax benefit was recorded. Tax reform was enacted by the federal government during the fourth quarter of 2017 and provided for the reduction in the applicable U.S. corporate tax rate from 35% to 21%, effective January 1, 2018.

The increase in the effective rate for 2017 as compared to 2016 was primarily the result of Tax Reform, which required the Company's U.S. net deferred tax assets to be revalued as of December 31, 2017. This resulted in a one-time charge to tax expense of $9.7 million in the fourth quarter of 2017. In addition to this law change, increases in valuation allowances against certain net operating loss carryforwards also contributed to the increase over the prior year.

Backlog

	2018	2017	2016
In thousands			
Aerospace	$851,814	$616,090	$581,619
Distribution	134,332	126,025	108,681
Total	$986,146	$742,115	$690,300

Backlog increased from 2017 to 2018, primarily driven by activity at our Aerospace segment. The increase in backlog at Aerospace was primarily associated with orders of our JPF and bearings products and orders under our AH-1Z program and composite structures programs. These increases were partially offset by a decrease in backlog primarily due to the acceleration of revenue for which delivery has not yet occurred resulting from the adoption of the new revenue recognition guidance, deliveries of direct commercial JPF orders and bearings products, customer acceptance of our K-MAX® aircraft and work performed on various programs.

Other Matters

Information regarding our various environmental remediation activities and associated accruals can be found in Note 17, Commitments and Contingencies, in the Notes to Consolidated Financial Statements included in this Form 10-K.

SEGMENT RESULTS OF OPERATIONS AND FINANCIAL CONDITION

Distribution Segment

Our Strategy

The Distribution segment's strategy is to offer a comprehensive portfolio of products and services, along with engineered solutions, to serve the mechanical, automation and fluid power markets driven by a highly trained technical sales and service organization while investing in technology to drive increased productivity and improved operating margins.

Results of Operations

The following table presents selected financial data for our Distribution segment:

	2018	2017	2016
In thousands			
Net sales	$1,139,431	$1,080,965	$1,106,322
$ change	58,466	(25,357)	(71,217)
% change	5.4 %	(2.3)%	(6.0)%
Operating income	$51,529	$51,372	$40,813
$ change	157	10,559	(6,104)
% change	0.3 %	25.9 %	(13.0)%
% of net sales	4.5 %	4.8 %	3.7 %

The following table details the components of the ASC 606 changes as a percentage of net sales and operating income at the Distribution segment as compared to the corresponding period in 2017:

	2018
Net sales:	
Increase in sales associated with ASC 606	0.4 %
Increase in sales absent the adoption impact of ASC 606	5.0 %
% change in net sales	5.4 %
Operating income:	
Increase in operating income associated with ASC 606	2.1 %
Decrease in operating income absent the adoption impact of ASC 606	(1.8)%
% change in operating income	0.3 %

Net sales

2018 versus 2017

Net sales for 2018 increased when compared to 2017, with $4.6 million of the increase resulting from the adoption of the new revenue recognition guidance. Within our product lines, the increase in sales was attributable to an increase in sales associated with our automation, control and energy product line, less significant increases in our bearings and power transmission and fluid power product lines and an additional sales day in 2018. The increase in net sales was mostly attributable to higher sales volume to our MRO customers and a less significant increase in sales volume to our OEM customers. Net sales were higher in the majority of the markets we serve, most notably the machinery manufacturing, paper manufacturing, food manufacturing and merchant wholesalers, durable goods markets.

2017 versus 2016

The decrease in net sales for 2017 as compared to 2016 was driven by decreases in sales associated with our bearings and power transmission and automation, control and energy product lines of $12.9 million and $12.4 million, respectively. Sales in our fluid power product line remained relatively flat when compared to 2016. The decreases in sales were mostly attributable to lower sales volume to our MRO customers of $37.3 million, partially offset by higher sales volume to our OEM customers. Additionally, there was one fewer sales day in the current year as compared to 2016. Looking at the end markets we serve, sales were lower in the food manufacturing and paper manufacturing markets. Partially offsetting these decreases were higher sales in the fabricated metal product and mining markets.

Organic sales per sales day is a metric management uses to evaluate performance trends in its Distribution segment and is calculated by taking total organic sales during a specific period divided by the number of sales days in that period. See Management's Discussion and Analysis of Financial Condition and Results of Operations - Non-GAAP Financial Measures, in this Form 10-K.

		2018	2017	2016
Organic Sales Per Sales Day				
(in thousands, except numbers of sales days)				
Current period				
Net sales		$1,139,431	$1,080,965	$1,106,322
Acquisition sales [(a)]		—	—	5,171
Organic sales		$1,139,431	$1,080,965	$1,101,151
Sales days		253	252	253
Organic sales per sales day for the current period	a	$4,504	$4,290	$4,352
Prior period				
Net sales from the prior year		$1,080,965	$1,106,322	$1,177,539
Sales days in the prior year		252	253	253
Organic sales per sales day from the prior year	b	$4,290	$4,373	$4,654
% change in organic sales per sales day	(a-b)/b	5.0 %	(1.9)%	(6.5)%

(a) Sales contributed by an acquisition are included in organic sales beginning with the thirteenth month following the date of acquisition. Prior period information is adjusted to reflect acquisition sales for that period as organic sales when calculating organic sales per sales day.

Operating Income

2018 versus 2017

Operating income for 2018 remained relatively flat when compared to the corresponding period in 2017. This was primarily due to higher sales and associated gross profit in all our product lines, mostly offset by an increase in employee and employee-related costs, including $1.9 million in higher group health costs, $1.4 million in one-time employee incentives, and $0.6 million in separation costs for certain employees.

2017 versus 2016

Operating income increased during 2017 as compared to 2016 primarily due to the benefits received from the productivity initiatives implemented in 2016 and lower expenses of $10.5 million for the costs incurred related to the implementation of these productivity and efficiency initiatives. The initiatives included operational process improvements and data analytics, primarily focused on expanding operating margins. Additionally, we experienced lower incentive compensation costs. These savings were partially offset by lower sales and associated gross profit.

Other Matters

Enterprise Resource Planning System

We continue to make progress in implementing a new ERP business system at our Distribution segment. Since the initial announcement, a couple of factors have delayed the full implementation of the ERP at this segment. The first of these factors is the acquisition of nine businesses leading to additional scope from the initial project plan. Second, multiple upgraded versions of the software have been released and we have elected to install these major upgrades in order to benefit from the improved functionality, the enhanced features these upgrades offer and the new user interface they provide. Each of these upgrades required additional development, integration and extensive testing. A major upgrade of the ERP system was successfully completed during 2018. The Distribution segment is now proceeding to the next step of implementation in 2019. As a result of these factors, the total project cost is currently estimated between $51.0 million and $54.0 million.

For the years ended December 31, 2018, 2017 and 2016, expenses incurred totaled approximately $1.1 million, $1.2 million and $1.4 million, respectively, and capital expenditures totaled $2.1 million, $3.6 million and $3.7 million, respectively. Total to date ERP system capital expenditures as of December 31, 2018 were $40.2 million. Depreciation expense for the ERP system for the years ended December 31, 2018, 2017 and 2016, totaled $2.8 million, $2.5 million and $2.8 million, respectively.

Aerospace Segment

Our Strategy

Our strategic goals for the Aerospace segment are built upon our objectives of differentiating our value proposition by utilizing engineering design, innovation processes, investments in automation, and process expertise to develop unique products and manufacturing processes within our global manufacturing facilities, increasing scale in our core competencies, diversifying our customer portfolio across multiple end markets and investing in our people, technologies and infrastructure. In order to achieve these objectives, we focus our efforts on improving balance between commercial and defense program content and customers, leveraging our broad capabilities to expand market positions, executing strategic acquisitions and increasing focused investments in our people, research and development, manufacturing technologies, capital equipment and infrastructure to increase capabilities and drive continuous improvement.

Results of Operations

The following table presents selected financial data for our Aerospace segment:

	2018	2017	2016
In thousands			
Net sales	$735,994	$724,944	$702,054
$ change	11,050	22,890	104,468
% change	1.5 %	3.3 %	17.5 %
Operating income	$94,357	$117,654	$112,846
$ change	(23,297)	4,808	5,953
% change	(19.8)%	4.3 %	5.6 %
% of net sales	12.8 %	16.2 %	16.1 %

The following table details the components of the ASC 606 changes as a percentage of net sales and operating income at the Aerospace segment as compared to the corresponding period in 2017:

	2018
Net sales:	
Increase in sales associated with ASC 606	8.2 %
Decrease in sales absent the adoption impact of ASC 606	(6.7)%
% change in net sales	1.5 %
Operating income:	
Increase in operating income associated with ASC 606	13.1 %
Decrease in operating income absent the adoption impact of ASC 606	(32.9)%
% change in operating income	(19.8)%

Net Sales

2018 versus 2017

Aerospace segment net sales for 2018 increased when compared to 2017, due to an increase in net sales of $59.7 million resulting from the adoption of the new revenue recognition guidance, as discussed below, partially offset by a decrease in net sales of $48.6 million absent the adoption of ASC 606. The decrease in net sales absent the adoption of the new revenue recognition guidance was primarily attributable to lower direct commercial sales of our JPF to foreign militaries, decreases in sales under the K-MAX® program and certain metallic structures programs and lower sales volume of our composite structures products from foreign operations. These decreases, totaling $70.8 million, were partially offset by higher sales volume of our bearings products, an increase in sales under the AH-1Z program and higher sales under the Sikorsky Combat Rescue Helicopter program. Foreign currency exchange rates relative to the U.S. dollar had a favorable impact of $5.0 million on net sales.

The increase in sales resulting from the adoption of the new revenue recognition guidance was primarily related to recognizing sales under our JPF program with the USG on an over time method using the cost-to-cost basis in the current period compared to percentage-of-completion using units-of-delivery in 2017 and the recognition of sales for our K-MAX® program at a point in time in the current period compared to a percentage-of-completion on a cost-to-cost basis in 2017.

2017 versus 2016

Aerospace segment net sales increased due to increases in sales for both our military and commercial product programs of $16.4 million and $6.5 million, respectively.

The increase in sales generated by our military product programs was primarily attributable to higher direct sales of our JPF to foreign militaries, an increase in sales under the AH-1Z program and our SH-2G program with Peru and higher sales volume of our JPF to the USG. These increases, totaling $31.9 million, were partially offset by a decrease in sales on the Boeing A-10 program and certain composite structures programs and lower sales volume of our fabricated products from foreign operations.

The increase in sales generated by our commercial product programs was primarily attributable to higher sales volume under our commercial bearing products, higher sales associated with the K-MAX® program and an increase in sales under our composite structure products from foreign operations. These increases, totaling $18.8 million, were partially offset by lower sales under the Boeing 767/777 program, a decrease in sales on the Bell Helicopter composite blade program and lower commercial tooling sales.

The impact of foreign currency exchange rates relative to the U.S. dollar was not material.

Operating Income

2018 versus 2017

Operating income decreased for 2018 as compared to 2017. The decrease was primarily attributable to a $38.7 million decrease in operating income absent the adoption of the new revenue recognition guidance, partially offset by a $15.4 million increase in operating income resulting from the adoption of the new revenue recognition guidance, as discussed below.

The decrease in operating income absent the adoption of the new revenue recognition guidance was primarily attributable to costs incurred at our U.K. business, including a $10.0 million impairment charge for definite-lived intangible assets, lower direct commercial sales of our JPF to foreign militaries, lower sales and associated gross profit under the K-MAX® program and our composite structures products from foreign operations, decreases in gross profit on the AH-1Z program and our bearings products and an increase in restructuring costs in the current period.

The increase in operating income resulting from the adoption of the new revenue recognition guidance was primarily related to recognizing sales and the associated gross profit under our JPF program with the USG on a cost-to-cost basis in the current period compared to percentage-of-completion using units-of-delivery in 2017 and the recognition of sales and associated gross profit under the K-MAX® program at a point in time in the current period compared to on a cost-to-cost basis in the comparable period in 2017.

2017 versus 2016

Operating income increased for 2017 as compared to 2016. The increase was primarily attributable to higher sales and associated gross profit on our commercial bearings products, the AH-1Z program, the SH-2G program with Peru and our composite structure products from foreign operations. In addition, there were lower S,G&A expenses associated with the sale of government inventory (see the table below for the expense recorded or benefit received from S,G&A expenses capitalized in inventory for certain government contracts). These increases, totaling $19.3 million, were partially offset by lower gross profit under our JPF program with the USG, as fuzes under Option 12 sold in 2017 were negotiated at a lower selling price than Option 11 sold in 2016, a decrease in gross profit on certain composite structure programs and lower gross margin on the K-MAX® program. Further offsetting some of the increases in operating income was $2.7 million in costs related to restructuring activities.

Additionally, offsetting some of the increase in operating income in 2017 was higher S,G&A expenses attributable to the sale of inventory associated with government contracts which included previously capitalized general and administrative expenses. See the table below for the expense recorded or benefit received from S,G&A expenses capitalized in inventory for certain government contracts. Under ASC 605, for certain USG contracts, S,G&A expenses were capitalized in inventory until revenue was recognized, to the extent that gross profit was available to offset the S,G&A expenses. The following table shows the expense recorded or benefit received from S,G&A expenses capitalized in inventory for certain government contracts.

	2018	2017	2016
In thousands			
S,G&A expensed (capitalized), net	$ —	$372	$2,465

Long-Term Contracts

For long-term aerospace contracts, we generally recognize sales and cost of sales over time because of continuous transfer of control to the customer, which allows for recognition of revenue as work on a contract progresses. For those programs for which there is a continuous transfer of control to the customer, we recognize sales and profit on a cost-to-cost basis, in which case sales and profit are recorded based upon the ratio of costs incurred to date to the total estimated costs to complete the contract. Conversely, revenue on certain programs, such as the K-MAX® program and on direct commercial sales under our JPF program, is recognized at a point in time, with revenue being recognized upon transfer to the end customer.

Revenue and cost estimates for all significant long-term contracts for which revenue is recognized over time are reviewed and reassessed quarterly. Based upon these reviews, we record the effects of adjustments in profit estimates each period. If at any time we determine that for a particular contract total costs will exceed total contract revenue, we will record a provision for the entire anticipated contract loss at that time. The amount of revenue recognized for the year ended December 31, 2018 from performance obligations satisfied (or partially satisfied) in previous periods was $6.7 million. This amount was primarily related to changes in estimates of the stage of completion of Aerospace contracts, more specifically the JPF contract with the

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USG and the AH-1Z contract. For the year ended December 31, 2017, the net increase in our operating income from changes in contract estimates totaled $5.7 million. The increase in 2017 was primarily a result of improved performance on the AH-1Z program, JPF program with the USG and the SH-2G program with Peru. These improvements were partially offset by cost growth on the K-MAX® and A-10 programs. The net decrease in our operating income from changes in contract estimates totaled $0.8 million for the year ended December 31, 2016. The decrease in 2016 was primarily a result of cost growth on various programs, including the Boeing 767/777 program, the A-10 program and certain composites structures and assembly programs. This cost growth was partially offset by improved performance on the JPF program.

Major Programs/Product Lines

Defense Markets

A-10

The segment was previously under contract with Boeing to produce the wing control surfaces (inboard and outboard flaps, slats and deceleron assemblies) for the USAF's A-10 fleet. Initial deliveries under this program began in 2010 and full rate production began in late 2012. Through December 31, 2018, we received orders and delivered 173 shipsets equivalent to the number of orders Boeing has received from the USAF over the life of the program. Final production and deliveries under this contract were completed during the third quarter of 2018. Revenues for the year ended December 31, 2018 were not material. Included in contract costs at December 31, 2018 were nonrecurring costs of $2.1 million related to this program to be utilized on future shipset orders, which may not be recoverable in the event of an extended break in production or program termination. At December 31, 2017, our program backlog was $1.2 million.

The USAF confirmed that the A-10 fleet would continue indefinitely due to its unique close-air support functions, with support from both Congress and the White House. In March 2018, the 2018 Appropriations Act was enacted, authorizing the USAF to spend an additional $103.0 million for A-10 wing replacements. In June 2018, the 2019 Defense Authorization Act was passed, authorizing $65.0 million for A-10 wing replacements. We have not received any additional orders beyond 173 shipsets; however, we are currently in negotiations with the customer and expect to be awarded a contract under this program in the first half of 2019.

Bearings

Our bearings products are included on numerous military platforms manufactured in North America, South America, Asia and Europe. These products are used as original equipment and/or specified as replacement parts by the manufacturers. The most significant portion of our military bearings sales is derived from U.S. military platforms, such as the AH-64 helicopter, Virginia Class submarine and Joint Strike Fighter aircraft, and sales in Europe for the Typhoon program. These products are primarily proprietary self-lubricating, ball and roller bearings for aircraft flight controls, turbine engines and landing gear, and helicopter driveline couplings.

BLACK HAWK

The Sikorsky BLACK HAWK helicopter cockpit program involves the manufacture of cockpits, including the installation of all wiring harnesses, hydraulic assemblies, control pedals and sticks, seat tracks, pneumatic lines and the composite structure that holds the windscreen for most models of the BLACK HAWK helicopter. We delivered 61 cockpits in 2018 as compared to the 77 cockpits delivered in 2017. In July 2017, we announced that our Aerospace segment had entered into a new multi-year contract with Sikorsky to manufacture H-60 cockpits under the Department of Defense MY IX H-60 procurement authorization. The term of the agreement is five years, beginning in 2018 and ending in 2022. Included in backlog at December 31, 2018 and 2017, was $81.0 million and $126.3 million, respectively, for orders on this program. We anticipate cockpit deliveries to total 66 in 2019.

Combat Rescue Helicopter

The Sikorsky Combat Rescue Helicopter program involves the manufacture of cockpits, including the installation of hydraulic assemblies, seat tracks, pneumatic lines and composite structures that hold the windscreen for most models of the H-60 helicopter and the fit of control pedals. During 2017, the Company was awarded a contract to provide developmental expertise and manufacture for the newly designed HH-60W Combat Rescue Helicopter, an advanced variant of the UH-60M BLACK HAWK helicopter. The initial contract has a total value of $8.7 million over 10 aircraft, with an expected follow-on contract with increased work scope for an additional 102 aircraft valued at approximately $62.2 million. We delivered ten ship sets in 2018. As of December 31, 2018, our backlog for this program was not material. As of December 31, 2017, our backlog for this program was $6.2 million.

AH-1Z

The segment manufactures sheet metal details and subassemblies for the increased capability AH-1Z attack helicopter, which is produced by Bell Helicopter for the U.S. Marine Corps. We are currently on contract through Lot 16. As of December 31, 2018 and 2017, our backlog for this program was $46.6 million and $49.1 million, respectively.

SH-2G Peru

During 2016, we were awarded a contract for $41.0 million with General Dynamics Mission Systems - Canada to commence work on the implementation phase of the previously announced Peruvian Navy's SH-2G Super Seasprite aircraft program. This contract is for the remanufacture and upgrade of four Kaman SH-2G Super Seasprite aircraft and support for the operation of a fifth aircraft for the Peruvian Navy. The total expected value to Kaman for the combined program, including this contract and previously issued contracts, totals $50.5 million. Total backlog at December 31, 2018 and 2017, was $4.3 million and $17.5 million, respectively.

FMU-152 A/B – Joint Programmable Fuze

We manufacture the JPF, an electro-mechanical bomb safe and arming device, which allows the settings of a weapon to be programmed in flight. The Company currently provides the FMU-152 A/B to the USAF and thirty-six other nations. Sales of these fuzes can be direct to the USAF, Foreign Military Sales ("FMS") through the USG and DCS to foreign militaries that, although not funded by the USG, require regulatory approvals from the USG.

We occasionally experience lot acceptance test failures due to the complexity of the product and the extreme parameters of the acceptance test. Given the maturity of the product, we now generally experience isolated failures, rather than systemic ones. As a result, identifying a root cause can take longer and result in inconsistent delivery quantities from quarter to quarter.

A total of 17,467 fuzes were delivered to our customers during the fourth quarter of 2018. A total of 32,216 fuzes were delivered in 2018. We expect to deliver 40,000 to 45,000 fuzes in 2019, primarily consisting of orders from the USG in order to meet the USG's current demand.

Total JPF backlog at December 31, 2018 was $454.1 million. Of this amount, $308.7 million in JPF backlog require future export approvals, licenses or authorizations from the USG before we are permitted to sell these products outside of the United States. The receipt of these export approvals, licenses or authorizations are subject to political and geopolitical conditions which could impact the timing and/or our ability to sell these products outside of the United States. Total JPF backlog at December 31, 2017 was $128.2 million.

JPF - USG

Under the new revenue recognition standard adopted January 1, 2018, revenue is recognized over time when costs are incurred as work progresses on the program.

The Company currently provides the FMU-152 A/B to the USAF, but the U.S. Navy currently utilizes a different fuze - the FMU-139. In 2015, NAVAIR solicited proposals for a firm fixed price production contract to implement improvements to the performance characteristics of the FMU-139 (such improved fuze having been designated the FMU-139 D/B), and, the USAF had stated that, if and when a contract is awarded and production begins, the funds associated with the FMU-152 A/B will be redirected to the FMU-139 D/B. During the third quarter of 2015, the U.S. Navy announced that a competitor was awarded the contract for the FMU-139 D/B. In the event the FMU-139 D/B program proceeds as planned and the USAF redirects the funds associated with the FMU-152 A/B to the FMU-139 D/B, our business, financial condition, results of operations and cash flows may be materially adversely impacted. The timing of the impact on our financial statements is dependent on the ability of our competitor to complete the design and qualification phase of the program and other factors. Our competitor has publicly stated that this program is expected to have a 32-month qualification phase, preceding production. Due to the complexity of this program, the uncertainty associated with the successful completion of each phase in accordance with the planned schedule and the pending status of the USAF's final decision to redirect funds to the FMU-139 D/B, the timing and magnitude of the impact on the Company's financial statements is not certain; however, the Company continues to see strong demand for the FMU-152 A/B. In 2017, we were awarded Options 13 and 14 with the USG. The USAF has exercised two orders under Option 13, which have a total value of more than $102.0 million, and two orders under Option 14 which have a total value of approximately $121.4 million. Additionally, the USAF issued a Notice of Contract Action announcing its intent to award us Options 15 and 16, which, if and when awarded, would extend FMU-152 A/B deliveries into 2022.

JPF - DCS

Revenue for DCS programs is generally recognized at the point in time when control is transferred to the customer under the new revenue recognition guidance. The Company continues to see strong demand for DCS fuzes. During the third quarter of 2018, we were awarded a DCS contract totaling approximately $48.6 million. During the first quarter of 2018, we were awarded a DCS contract totaling approximately $324.0 million, of which $307.5 million was included in backlog as of December 31, 2018. The remaining $16.5 million relates to potential penalties payable to the customer in the event the offset requirements of the contract are not met. This agreement is designed to return economic value to the foreign country by requiring us to engage in activities supporting local defense or commercial industries, promoting a balance of trade, developing in-country technology capabilities or addressing other local development priorities. The offset agreement may be satisfied through activities that do not require a direct cash payment, including transferring technology, providing manufacturing, training and other consulting support to in-country projects and the purchase by third parties of supplies from in-country vendors. This agreement may also be satisfied through the Company's use of cash for activities, such as subcontracting with local partners, purchasing supplies from in-country vendors, providing financial support for in-country projects and making investments in local ventures. The offset requirements associated with this contract could extend for several years and have a notional value of approximately $194.0 million, which is equal to sixty percent of the total contract value as defined by the agreement with the customer. The amount ultimately applied against the offset agreement is based on negotiations with the customer and may require cash outlays that represent only a fraction of the notional value in the offset agreement. We are currently in the process of developing a proposal to satisfy the offset requirements that will be submitted to the customer within the first half of 2019. We expect approval of the proposal before the end of 2019. The satisfaction of the offset requirements will be determined by the customer and is expected to occur over a seven-year period. Additionally, this contract provides for potential penalties payable to the customer of up to 10% of the total contract value in the event that we default on the contract and we are unable to fulfill our contractual commitments. Any delay in the receipt of necessary export approvals, licenses or authorizations from the USG could result in customer cancellation of the contract, the incurrence of significant penalties by the Company and the return of advance payments to our customer, which could have a material adverse effect our results of operations, financial condition and cash flows.

Commercial Markets

K-MAX®

During 2015, we announced that our Aerospace segment was resuming production of commercial K-MAX® aircraft. The aircraft are being manufactured at our Jacksonville, Florida and Bloomfield, Connecticut facilities. The first nine helicopters from the newly reopened commercial production line were accepted by our customers through December 2018, of which five aircraft were accepted by our customers in 2018. We received three orders for K-MAX® aircraft during the fourth quarter of 2018, of which two were delivered during the fourth quarter and the third is expected to be delivered in the first half of 2019. During the fourth quarter of 2018, we announced that we will continue production of the commercial K-MAX® aircraft into 2020 at a minimum due to continued interest in the capabilities of the K-MAX®. As of December 31, 2018 and 2017, our backlog for this program was $14.9 million and $4.1 million, respectively.

777 / 767

In 2015, we signed a multi-year follow-on contract with Boeing for the production of fixed trailing edge ("FTE") assemblies for the Boeing 777 and 767 commercial aircraft. To date, Kaman has provided more than 1,250 FTE kits and assemblies for each of the 777 and 767 programs since 1995 and 1986, respectively. During 2018, on average, we delivered three shipsets per month on the Boeing 777 platform and three shipsets per month on the Boeing 767 platform, which includes one shipset per month associated with a military tanker derivative of the 767. For 2019, we estimate deliveries on the 777 program to be four shipsets per month and on the 767 program to be three shipsets per month which includes one shipset per month associated with a military tanker derivative of the 767. The total contract value is estimated to be in excess of $90 million; however, annual quantities will vary, as they are dependent upon the orders Boeing receives from its customers. As of December 31, 2018 and 2017, our backlog for these programs was $9.3 million and $14.2 million, respectively.

Airbus

Our U.K. Composites operations provide composite components for many Airbus platforms. The most significant of these are the A320, A330 and A350. Orders for all of these platforms are dependent on the customer’s build rate.

Bearings

Our bearings products are included on commercial airliners and regional/business jets manufactured in North and South America, Europe and Asia and are used as original equipment and/or specified as replacement parts by airlines and aircraft manufacturers. These products are primarily proprietary self-lubricating, ball and roller bearings for aircraft flight controls, turbine engines, landing gear and helicopter driveline couplings. The most significant portion of our commercial sales is derived from Boeing, Airbus and Bombardier platforms, such as the Boeing 737, 747, 777 and 787, the Airbus A320, A330, A350 and A380, and the Bombardier Global 7500.
Additionally, our bearings offerings include super precision miniature ball bearings used primarily in aerospace applications, dental products, surgical power tools, analytical devices and various industrial applications.

Bell Helicopter

In 2018, we were awarded a follow-on contract with Bell Helicopter to manufacture skin and skin-to-core components for several of Bell’s commercial helicopter models. At December 31, 2018 and 2017, $1.2 million and $3.9 million, respectively, was included in backlog for orders under this program. Annual quantities for this program will vary, as they are dependent upon the orders Bell receives from its customers.

Other Matters

Learjet 85

In 2010, our U.K. Composites operation was awarded a contract to manufacture composite passenger entry and over-wing exit doors for the Learjet 85, a mid-sized business jet built primarily from composites and featuring advances in aerodynamics, structures and efficiency; however, in October 2015, Bombardier Inc. announced the cancellation of its Learjet 85 business aircraft program. At December 31, 2018, we had total accounts receivable and contract assets related to the program of $3.6 million. During 2016, we filed suit against our customer to recover this amount. Although we expect to recover the full amount of our claim, there can be no assurance that we will prevail in the litigation.

For a discussion of other matters related to our Aerospace segment see Note 17, Commitments and Contingencies, in the Notes to Consolidated Financial Statements included in this Form 10-K.

LIQUIDITY AND CAPITAL RESOURCES

Discussion and Analysis of Cash Flows

We assess liquidity in terms of our ability to generate cash to fund working capital requirements and investing and financing activities. Significant factors affecting liquidity include: cash flows generated from or used by operating activities, capital expenditures, investments in our business segments and their programs, acquisitions, divestitures, dividends, availability of future credit, adequacy of available bank lines of credit and factors that might otherwise affect the Company's business and operations generally, as described under the heading “Risk Factors” and “Forward-Looking Statements” in Item 1A of Part I of this Form 10-K.

We continue to rely upon bank financing as an important source of liquidity for our business activities including acquisitions. We believe this, when combined with cash generated from operating activities, will be sufficient to support our anticipated cash requirements for the foreseeable future. However, we may decide to raise additional debt or equity capital to support other business activities including potential future acquisitions.

In addition to our working capital requirements, one or more of the following items could have an impact on our liquidity during the next 12 months:

- the matters described in Note 17, Commitments and Contingencies, in the Notes to Consolidated Financial Statements, including the cost of existing environmental remediation matters discussed in Note 11, Environmental Costs;
- contributions to our qualified pension plan and Supplemental Employees’ Retirement Plan (“SERP”);
- deferred compensation payments to officers;
- interest payments on outstanding debt;
- income tax payments;
- capital and operating lease payments;
- capital expenditures;
- repurchase of common stock under the 2015 Share Repurchase Program;
- payment of dividends;
- costs associated with the start-up of new aerospace programs; and
- the extension of payment terms by our customers.

In addition to the items listed above, we have received $97.2 million in advance payments, which relate to $129.6 million in letters of credit for a JPF DCS contract in 2018. In the event that we default on the contract and we are unable to fulfill our contractual commitments, our customer has the ability to draw on the letters of credit.

We regularly monitor credit market conditions to identify potential issues that may adversely affect, or provide opportunities for, the securing and/or pricing of additional financing, if any, that may be necessary to continue with our growth strategy and finance working capital requirements.

Management regularly monitors its pension plan asset performance and the assumptions used in the determination of our benefit obligation, comparing them to actual experience. We continue to believe the assumptions selected are valid due to the long-term nature of our benefit obligation.

Effective December 31, 2015, the qualified pension plan was frozen with respect to future benefit accruals. Under U.S. Government Cost Accounting Standard ("CAS") 413 we must calculate the USG’s share of any pension curtailment adjustment resulting from the freeze. Such adjustments can result in an amount due to the USG for pension plans that are in a surplus position or an amount due to the contractor for plans that are in a deficit position.

During the fourth quarter of 2016, we accrued a $0.3 million liability representing our estimate of the amount due to the USG based on our pension curtailment adjustment calculation which was submitted to the USG for review in December 2016. We have maintained our accrual at $0.3 million as of December 31, 2018. There can be no assurance that the ultimate resolution of this matter will not have a material adverse effect on our results of operations, financial position and cash flows.

A summary of our consolidated cash flows is as follows:

	2018	2017	2016	18 vs. 17	17 vs.16
(in thousands)					
Total cash provided by (used in):					
Operating activities	$162,368	$79,885	$107,707	$82,483	$(27,822)
Investing activities	(29,961)	(31,835)	(37,583)	1,874	5,748
Financing activities	(141,362)	(54,736)	(43,959)	(86,626)	(10,777)
Free Cash Flow(1) :					
Net cash provided by operating activities	$162,368	$79,885	$107,707	$82,483	$(27,822)
Expenditures for property, plant and equipment	(29,871)	(27,631)	(29,777)	(2,240)	2,146
Free cash flow	$132,497	$52,254	$77,930	$80,243	$(25,676)

(1) Free Cash Flow, a non-GAAP financial measure, is defined as net cash provided by operating activities less expenditures for property plant and equipment, both of which are presented in our Consolidated Statements of Cash Flows. See Management's Discussion and Analysis of Financial Condition and Results of Operations-Non-GAAP Financial Measures, in this Form 10-K.

2018 vs. 2017

Net cash provided by operating activities increased $82.5 million in 2018 compared to 2017, primarily due to advance payments received under a JPF DCS contract, partially offset by higher pension contributions in the current period.

Net cash used in investing activities decreased $1.9 million in 2018 compared to 2017 primarily due to proceeds received from the sale of assets and the absence of an earnout payment associated with a previous acquisition incurred in the prior period.

Net cash used in financing activities increased in 2018 by $86.6 million compared to 2017, primarily due to the absence of the convertible notes transactions and higher net repayments of our revolving credit facility in the current period. In the prior period, convertible notes transactions consisted of $200.0 million in proceeds received from the issuance of our 2024 Notes and $58.6 million in proceeds related to the unwind of a portion of the convertible note hedge transactions related to our 2017 Notes, which were partially offset by the cost to repurchase a portion of the 2017 Notes, the purchase of the capped call transactions related to our 2024 Notes and higher debt issuance costs associated with the issuance of our 2024 Notes.

2017 vs. 2016

Net cash provided by operating activities decreased $27.8 million in 2017 compared to 2016, due to higher accounts receivable under our JPF program resulting from the timing of collections, partially offset by lower inventory related to our K-MAX®, JPF and legacy fuze programs and the timing of accounts payable cash disbursements.

Net cash used in investing activities decreased $5.7 million in 2017 compared to 2016 primarily due to a lower earnout payment associated with a previous acquisition in 2017.

Net cash used in financing activities increased in 2017 by $10.8 million compared to 2016, primarily due to the cost to repurchase a portion of the 2017 Notes, higher repayments under our revolving credit facility, the purchase of capped call transactions related to our 2024 Notes and higher debt issuance costs associated with the issuance of our 2024 Notes. These changes were partially offset by $200.0 million in proceeds received from the issuance of our 2024 Notes and $58.6 million in proceeds received related to the unwind of a portion of the convertible note hedge transactions related to the 2017 Notes.

Financing Arrangements

Refer to Note 12, Debt, in the Notes to the Consolidated Financial Statements, included in Item 8, Financial Statements and Supplementary Data, of this Form 10-K for further information on our Financing Arrangements.

Convertible Notes

2024 Notes

During May 2017, we issued $200.0 million aggregate principal amount of convertible senior unsecured notes due May 2024 (the "2024 Notes") pursuant to an indenture (the "Indenture"), dated May 12, 2017, between the Company and U.S. Bank National Association, as trustee. In connection therewith, we entered into certain capped call transactions that cover, collectively, the number of shares of the Company's common stock underlying the 2024 Notes. The 2024 Notes bear 3.25% interest per annum on the principal amount, payable semiannually in arrears on May 1 and November 1 of each year, beginning on November 1, 2017. The 2024 Notes will mature on May 1, 2024, unless earlier repurchased by the Company or converted. We will settle any conversions of the 2024 Notes in cash, shares of the Company's common stock or a combination of cash and shares of common stock, at the Company's election.

The following table illustrates the dilutive effect of securities issued under the 2024 Notes at various theoretical average share prices for our stock as of December 31, 2018:

	Theoretical Average Share Price of Kaman Stock				
	$65.26	$70.00	$75.00	$80.00	$84.84
Dilutive Shares associated with:					
Convertible Debt	—	207,399	397,876	564,542	707,164

2017 Notes

In November 2010, the Company issued convertible senior unsecured notes due on November 15, 2017 ("2017 Notes"), in the aggregate principal amount of $115.0 million in a private placement offering. These notes bore 3.25% interest per annum on the principal amount, payable semiannually in arrears on May 15 and November 15 of each year, beginning in 2011. In May 2017, the Company used a portion of the net proceeds from the issuance of the 2024 Notes, along with cash received from the counterparties in connection with the termination of the existing convertible note hedge transactions, to repurchase $103.5 million principal amount of the 2017 Notes from a limited number of holders in an arm's length transaction. This repurchase represented approximately 90% of the aggregate principal amount of 2017 Notes. The repurchases were accounted for as an extinguishment of the outstanding instrument. Of the total aggregate cost of $165.3 million, $60.0 million was allocated to the equity component of the 2017 Notes and was recorded as a reduction to additional paid-in capital. The remainder of the cost was attributed to the outstanding principal repurchased and accrued interest. The repayment of a portion of the 2017 Notes was not contingent upon the issuance of the 2024 Notes. As such, the repurchase of the 2017 Notes was accounted for as a debt extinguishment. The remaining portion of the 2017 Notes and bond hedge were settled in November 2017. A portion of the existing warrant transactions associated with the 2017 Notes remained outstanding at December 31, 2017. During the first half of 2018, the remaining warrant transactions were settled with 114,778 shares of the Company's common stock.

Credit Agreement

The Company has a $700.0 million Credit Agreement (the "Credit Agreement"), as amended, with JPMorgan Chase Bank N.A., as Administrative Agent, Bank of America, N.A. and Citizens Bank, N.A. as Co-Syndication Agents and SunTrust Bank, KeyBank N.A., TD Bank, N.A., BB&T and Fifth Third Bank, as Co-Documentation Agents. The Credit Agreement matures on May 6, 2020 and has revolving commitments of $600.0 million and a Term Loan commitment of $100.0 million. Capitalized terms used but not defined within this discussion of the Credit Agreement have the meanings ascribed thereto in the Credit Agreement.

The Term Loan commitment requires quarterly payments of principal (which commenced on June 30, 2015) at the rate of $1.25 million, increasing to $1.875 million on June 30, 2017, and then to $2.5 million on June 30, 2019, with

$65.0 million payable in the final quarter of the facility's term. The facility includes an accordion feature that allows the Company to increase the aggregate amount available up to $900.0 million with additional commitments from the Lenders.

Interest rates on amounts outstanding under the Credit Agreement are variable. At December 31, 2018 and 2017, the interest rates for the outstanding amounts on the Credit Agreement were 3.74% and 2.84%, respectively. In addition, we are required to pay a quarterly commitment fee on the unused revolving loan commitment amount at a rate ranging from 0.175% to 0.300% per annum, based on the Consolidated Senior Secured Leverage Ratio. Fees for outstanding letters of credit range from 1.25% to 2.00%, based on the Consolidated Senior Secured Leverage Ratio.

Total average bank borrowings under our revolving credit facility and term loan facility during the year ended December 31, 2018, were $151.6 million compared to $256.5 million for the year ended December 31, 2017. As of December 31, 2018 and 2017, there was $408.9 million and $453.3 million available for borrowing, respectively, net of letters of credit. However, based on EBITDA levels at December 31, 2018 and 2017, amounts available for borrowings were limited to $323.5 million and $246.0 million, respectively. Letters of credit are generally considered borrowings for purposes of calculating available borrowings. As of December 31, 2018, $152.6 million letters of credit were outstanding, all of which were under the revolving credit facility. Of this amount, $146.2 million letters of credit relate to a JPF DCS contract. As of December 31, 2017, $6.7 million letters of credit were outstanding, of which, $6.5 million were under the revolving credit facility.

Interest Rate Swaps

During 2015, we entered into interest rate swap agreements for the purposes of hedging the eight quarterly variable-rate Term Loan interest payments due in 2016 and 2017. Additionally, we entered into interest rate swap agreements to effectively convert $83.8 million of our variable rate revolving credit facility debt to a fixed interest rate. These interest rate swap agreements were designated as cash flow hedges and intended to manage interest rate risk associated with our variable-rate borrowings and minimize the impact on our earnings and cash flows of interest rate fluctuations attributable to changes in LIBOR rates. As of December 31, 2017, these interest rate swap agreements had all matured and were not outstanding. As such, there was no activity related to these contracts for the year ended December 31, 2018. The activity related to these contracts was not material to the Company's Consolidated Financial Statements for the year ended December 31, 2017. Interest expense associated with these interest rate swap agreements for the year ended December 31, 2016, was $0.9 million.

Other Sources/Uses of Capital

Pension

We contributed $30.0 million and $10.0 million to the qualified pension plan during 2018 and 2017, respectively. We do not anticipate making any contributions to the qualified pension plan in 2019. We paid $0.9 million and $3.1 million in SERP benefits during 2018 and 2017, respectively. We expect to pay $0.5 million in SERP benefits in 2019.

Acquisitions

The following table illustrates the cash paid for acquisitions:

	For the year ended December 31,		
	2018	2017	2016
In thousands			
Cash paid for holdback payments during the year	$—	$—	$1,014
Earn-out and other payments during the year	—	1,365	5,617
Total cash paid for acquisitions	$—	$1,365	$6,631

No acquisitions were completed in 2018, 2017 or 2016. We continue to identify and evaluate potential acquisition candidates, the purchase of which may require the use of additional capital.

Stock Repurchase Plans

On April 29, 2015, we announced that our Board of Directors approved a share repurchase program ("2015 Share Repurchase Program") authorizing the repurchase of up to $100.0 million of the common stock, par value $1.00 per share, of the Company. We currently intend to repurchase shares to offset the annual issuance of shares under our employee stock plans, but the timing and actual number of shares repurchased will depend on a variety of factors including stock price, market conditions, corporate and regulatory requirements, capital availability and other factors, including acquisition opportunities. As of December 31, 2018, we had repurchased 1,097,853 shares under the 2015 Share Repurchase Program and approximately $45.7 million remained available for repurchases under this authorization.

NON-GAAP FINANCIAL MEASURES

Management believes that the non-GAAP measures used in this Annual Report on Form 10-K provide investors with important perspectives into our ongoing business performance. We do not intend for the information to be considered in isolation or as a substitute for the related GAAP measures. Other companies may define the measures differently. We define the non-GAAP measures used in this report and other disclosures as follows:

Organic Sales

Organic Sales is defined as "Net Sales" less sales derived from acquisitions completed during the preceding twelve months. We believe that this measure provides management and investors with a more complete understanding of underlying operating results and trends of established, ongoing operations by excluding the effect of acquisitions, which can obscure underlying trends. We also believe that presenting Organic Sales separately for our segments provides management and investors with useful information about the trends impacting our segments and enables a more direct comparison to other businesses and companies in similar industries. Management recognizes that the term "Organic Sales" may be interpreted differently by other companies and under different circumstances.

Organic Sales (in thousands)

	2018	2017	2016
Distribution			
Net sales	$1,139,431	$1,080,965	$1,106,322
Less: Acquisition Sales	—	—	5,171
Organic Sales	$1,139,431	$1,080,965	$1,101,151
Aerospace			
Net sales	$735,994	$724,944	$702,054
Less: Acquisition Sales	—	—	63,483
Organic Sales	$735,994	$724,944	$638,571
Consolidated			
Net sales	$1,875,425	$1,805,909	$1,808,376
Less: Acquisition Sales	—	—	68,654
Organic Sales	$1,875,425	$1,805,909	$1,739,722

Organic Sales per Sales Day

Organic sales per sales day is defined as GAAP “Net sales of the Distribution segment,” less sales derived from acquisitions completed during the preceding twelve months, divided by the number of sales days in a given period. Sales days ("Sales Days") are the days that the Distribution segment’s branch locations were open for business and exclude weekends and holidays. Management believes Organic Sales per Sales Day provides an important perspective on how net sales may be impacted by the number of days the segment is open for business and provides a basis for comparing periods in which the number of sales days differs. For the Organic Sales per Sales Day for 2018, 2017 and 2016, please refer to Results of Operations - Segment Results of Operations and Financial Condition - Distribution Segment in the Management's Discussion and Analysis of Financial Condition and Results of Operation in this Annual Report on Form 10-K.

Free Cash Flow

Free cash flow is defined as GAAP “Net cash provided by (used in) operating activities” in a period less “Expenditures for property, plant & equipment” in the same period. Management believes Free Cash Flow provides an important perspective on our ability to generate cash from our business operations and, as such, that it is an important financial measure for use in evaluating the Company's financial performance. Free Cash Flow should not be viewed as representing the residual cash flow available for discretionary expenditures such as dividends to shareholders or acquisitions, as it may exclude certain mandatory expenditures such as repayment of maturing debt and other contractual obligations. Management uses Free Cash Flow internally to assess overall liquidity.

CONTRACTUAL OBLIGATIONS AND OFF-BALANCE SHEET ARRANGEMENTS

Contractual Obligations

The following table summarizes certain of the Company’s contractual obligations as of December 31, 2018:

	Payments due by period (in millions)				
Contractual Obligations	Total	Within 1 year	1-3 years	3-5 years	More than 5 years
Long-term debt (including convertible notes)	$315.4	$ 9.4	$ 106.0	$ —	$ 200.0
Interest payments on debt [(a)]	79.1	15.0	30.3	30.5	3.3
Operating leases	101.8	27.5	42.3	21.5	10.5
Capital leases	8.6	2.0	3.9	2.5	0.2
Purchase obligations [(b)]	305.3	271.6	33.1	0.6	—
Other long-term obligations [(c)]	52.4	13.6	16.0	4.3	18.5
Planned funding of pension and SERP [(d)]	6.2	0.5	2.8	0.9	2.0
Total	$868.8	$ 339.6	$ 234.4	$ 60.3	$ 234.5

Note: For more information refer to Note 12, Debt; Note 14, Income Taxes; Note 15, Pension Plans; Note 16, Other Long-Term Liabilities and Note 17, Commitments and Contingencies in the Notes to Consolidated Financial Statements included in this Form 10-K.

(a) Interest payments on debt are calculated based on the applicable rate and payment dates for each instrument. For variable-rate instruments, interest rates and payment dates are based on management’s estimate of the most likely scenarios for each relevant debt instrument.

(b) This category includes purchase commitments to suppliers for materials and supplies as part of the ordinary course of business, consulting arrangements and support services. Only obligations of at least $50,000 are included.

(c) This category includes obligations under the Company's long-term incentive plan, deferred compensation plan, environmental liabilities, acquisition holdbacks and unrecognized tax benefits.

(d) This category includes planned funding of the Company’s SERP and qualified pension plan. Projected funding for the qualified pension plan beyond one year has not been included as there are several significant factors, such as the future market value of plan assets and projected investment return rates, which could cause actual funding requirements to differ materially from projected funding.

Off-Balance Sheet Arrangements

As of December 31, 2018, we had no significant off-balance sheet arrangements other than purchase obligations, operating leases and $152.6 million of outstanding standby letters of credit, all of which were under the revolving credit facility. Of this amount, $146.2 million letters of credit relate to a JPF DCS contract.

CRITICAL ACCOUNTING ESTIMATES

Our significant accounting policies are outlined in Note 1, Summary of Significant Accounting Policies, to the Consolidated Financial Statements included in this Form 10-K. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosures based upon historical experience, current trends and other factors that management believes to be relevant. We are also responsible for evaluating the propriety of our estimates, judgments and accounting methods as new events occur. Actual results could differ from those estimates. Management periodically reviews the Company’s critical accounting policies, estimates and judgments with the Audit Committee of our Board of Directors. The most significant areas currently involving management judgments and estimates are described below.

Revenue from Contracts with Customers
Methodology
We recognize sales and profit based upon either (1) the over time method, in which sales and profit are recorded based upon the ratio of costs incurred to date to estimated total costs to complete the performance obligation, or (2) the point-in-time method, in which sales are recognized at the time control is transferred to the customer. For long-term aerospace contracts, we generally recognize sales and income over time because of continuous transfer of control to the customer. Revenue is generally recognized using the cost-to-cost method based on the extent of progress towards completion of the performance obligation, which allows for recognition of revenue as work on a contract progresses. On January 1, 2018, the Company adopted Accounting Standard Codification 606, Revenue from Contracts with Customers, using the modified retrospective method. As a result, the Company applied ASC 606 only to contracts that were not completed as of January 1, 2018. Prior to the adoption of ASC 606, for long-term aerospace contracts, we generally recognized sales and income based on the percentage-of-completion method accounting, which allowed for recognition of revenue as work on a contract progressed. We recognized sales and profit based upon either (1) the cost-to-cost method, in which sales and profit were recorded based upon the ratio of costs incurred to estimated total costs to complete the contract, or (2) the units-of delivery method, in which sales were recognized as deliveries were made and cost of sales was computed on the basis of the estimated ratio of total contract cost to total contract sales. Management performs detailed quarterly reviews of all of our significant long-term contracts. Based upon these reviews, we record the effects of adjustments in profit estimates each period. If at any time management determines that in the case of a particular contract total costs will exceed total contract revenue, we record a provision for the entire anticipated contract loss at that time.
Judgment and Uncertainties
The over time revenue recognition model requires that we estimate future revenues and costs over the life of a contract. Revenues are estimated based upon the original contract price, with consideration being given to exercised contract options, change orders and, in some cases, projected customer requirements. Contract costs may be incurred over a period of several years, and the estimation of these costs requires significant judgment based upon the acquired knowledge and experience of program managers, engineers and financial professionals. Estimated costs are based primarily on anticipated purchase contract terms, historical performance trends, business base and other economic projections. The complexity of certain programs as well as technical risks and uncertainty as to the future availability of materials and labor resources could affect the Company’s ability to accurately estimate future contract costs.

The following table illustrates the amount of revenue recognized for performance obligations satisfied over time versus the amount of revenue recognized for performance obligations satisfied at a point in time for the Aerospace segment.

	2018	2017	2016
In thousands			
ASC 606			
Revenue recognized for performance obligations satisfied			
Point-in-time	$383,109	$ —	$ —
Over time	352,885	—	—
Total revenue recognized for performance obligations satisfied[1]	$735,994	$ —	$ —
% of Aerospace net sales - Point-in-time	52.1 %	—%	—%
% of Aerospace net sales - Over time	47.9 %	—%	—%
% of Aerospace net sales - Performance obligations satisfied	100.0 %	—%	—%

[1] The disaggregation of revenue recognized for performance satisfied over time versus point-in-time has not been included for the Distribution segment, as the majority of its revenue is recognized on a point-in-time basis with less than 2% of revenue recognized for performance obligations over time.

The following table illustrates the amount revenue recognized under the percentage-of-completion method for the Aerospace segment prior to the adoption of ASC 606.

	2018	2017	2016
In thousands			
ASC 605			
Revenue recognized under percentage of completion method			
Units-of-delivery	$ —	$317,906	$307,294
Cost-to-cost	—	55,119	47,085
Total revenue recognized under percentage of completion method	$ —	$373,025	$354,379
% of Aerospace net sales - Units-of-delivery	—	43.9 %	43.8 %
% of Aerospace net sales - Cost-to-cost	—	7.6 %	6.7 %
% of Aerospace net sales - Percentage-of-completion method	—%	51.5 %	50.5 %

Effect if Actual Results Differ From Assumptions

While we do not believe there is a reasonable likelihood there will be a material change in estimates or assumptions used to calculate our long-term revenues and costs, estimating the percentage of work complete on certain programs is a complex task. As a result, changes to these estimates could have a significant impact on our results of operations. These programs include the Sikorsky BLACK HAWK program, the JPF program with the USG, the Boeing A-10 program, the AH-1Z program, our other Bell Helicopter programs and several other programs. Estimating the ultimate total cost of these programs is challenging due to the complexity of the programs, unanticipated increases in production requirements, the nature of the materials needed to complete these programs, change orders related to the programs and the need to manage our customers' expectations. These programs are an important element in our continuing strategy to increase operating efficiencies and profitability as well as broaden our business base. Management continues to monitor and update program cost estimates quarterly for these contracts. A significant change in an estimate on one or more of these programs could have a material effect on our financial position and results of operations.The amount of revenue recognized from performance obligations satisfied (or partially satisfied) in previous periods was $6.7 million for the year ended December 31, 2018. The net increase in our operating income from changes in contract estimates totaled $5.7 million for the year ended December 31, 2017. The net decrease in our operating income from changes in contract estimates totaled $0.8 million for the year ended December 31, 2016.

Allowance for Doubtful Accounts

Methodology

The allowance for doubtful accounts represents management's best estimate of probable losses inherent in the receivable balance. These estimates are based on known past due amounts and historical write-off experience, as well as trends and factors impacting the credit risk associated with specific customers. In an effort to identify adverse trends for trade receivables, we perform ongoing reviews of account balances and the aging of receivables. Amounts are considered past due when payment has not been received within a pre-determined time frame based upon the credit terms extended. For our government and commercial contracts, we evaluate, on an ongoing basis, the amount of recoverable costs. The recoverability of costs is evaluated on a contract-by-contract basis based upon historical trends of payments, program viability and the customer's credit-worthiness.

Judgment and Uncertainties

Write-offs are charged against the allowance for doubtful accounts only after we have exhausted all collection efforts. Actual write-offs and adjustments could differ from the allowance estimates due to unanticipated changes in the business environment as well as factors and risks associated with specific customers.

Effect if Actual Results Differ From Assumptions

As of December 31, 2018 and 2017, our allowance for doubtful accounts was $4.1 million. Receivables written off, net of recoveries, in 2018 and 2017 were $1.1 million and $1.2 million, respectively.

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Currently we do not believe that we have a significant amount of risk relative to the allowance for doubtful accounts. A 10% change in the allowance would have a $0.4 million effect on pre-tax earnings.

Inventory Valuation

Methodology

We have five types of inventory (a) merchandise for resale, (b) raw materials, (c) contracts in process, (d) other work in process and (e) finished goods. Merchandise for resale and raw materials are stated at the lower of the cost of the inventory or its fair market value. Contracts in process, other work in process and finished goods are valued at production cost comprised of material, labor and overhead, including general and administrative expenses on certain government contracts. Contracts in process, other work in process and finished goods are reported at the lower of cost or net realizable value. Raw material includes certain general stock materials but primarily relates to purchases that were made in anticipation of specific programs that have not been started as of the balance sheet date.

Judgment and Uncertainties

The process for evaluating inventory obsolescence or market value often requires the Company to make subjective judgments and estimates concerning future sales levels, quantities and prices at which such inventory will be sold in the normal course of business. We adjust our inventory by the difference between the estimated market value and the actual cost of our inventory to arrive at net realizable value. Changes in estimates of future sales volume may necessitate future write-downs of inventory value. At December 31, 2018, $34.7 million of K-MAX® inventory, including inventory associated with the new build aircraft, was included in contracts and other work in process and finished goods, of which management believes that approximately $18.1 million will be sold after December 31, 2019, based upon the anticipation of additional aircraft manufacturing and supporting the fleet for the foreseeable future. We believe it is stated at net realizable value, although lack of demand for spare parts in the future could result in additional write-downs of the inventory value. Overall, management believes that our inventory is appropriately valued and not subject to further obsolescence in the near term.

Management believes $5.0 million of the SH-2G(I) inventory will be sold after December 31, 2019. This balance represents spares requirements and inventory to be used in SH-2G programs.

Effect if Actual Results Differ From Assumptions

Inventory valuation at our Distribution segment generally requires less subjective management judgment than the valuation of certain inventory in the Aerospace segment. Management reviews the K-MAX® inventory balance on an annual basis to determine whether any additional write-downs are necessary. We believe this inventory is stated at net realizable value, although lack of demand for spare parts in the future could result in additional write-downs of the inventory value. Overall, management believes that our inventory is appropriately valued and not subject to further obsolescence in the near term. If such a write-down were to occur, this could have a significant impact on our operating results. A 10% write-down of the December 31, 2018 K-MAX® inventory balance would have affected pre-tax earnings by approximately $3.5 million in 2018.

The balance of SH-2G(I) inventory projected to be sold after December 31, 2019, represents spares requirements and inventory to be used to support the SH-2G programs in future periods and as such is appropriately valued as of December 31, 2018.

Goodwill and Other Intangible Assets

Methodology

Goodwill and certain intangible assets that have indefinite lives are evaluated at least annually for impairment. The annual evaluation is generally performed during the fourth quarter, using forecast information. All intangible assets are also reviewed for possible impairment whenever changes in conditions indicate that their carrying value may not be recoverable. For reporting units that qualify for a qualitative assessment, management will perform the two-step impairment test after a period of three years has elapsed since the test was last performed.

In accordance with generally accepted accounting principles, we test goodwill for impairment at the reporting unit level and other long-lived intangible assets (excluding goodwill) for impairment at the lowest level for which identifiable cash flows are available. The identification and measurement of goodwill impairment involves the estimation of fair value of the reporting unit as compared to its carrying value. The identification and measurement of other long-lived intangible asset impairment involves the estimation of future cash flows of the business unit as compared to its carrying value. In the Distribution segment, goodwill is tested at the segment level as no components represent reporting units. In the Aerospace segment, goodwill is tested one level below the segment level, and components are not aggregated for purposes of goodwill testing.

The carrying value of goodwill as of December 31, 2018, was $149.2 million and $196.2 million for the Distribution and Aerospace segments, respectively. The specific Aerospace reporting units contributing to the total goodwill balance were as follows: Precision Products Orlando facility ("KPP-Orlando"), $41.4 million; Specialty Bearings and Engineered Products, $104.8 million; and Aerosystems, $50.0 million. During 2018, it was determined that the two-step impairment test would be performed for the following reporting units: Distribution and Aerosystems. See Note 10, Goodwill and Other Intangible Assets, Net, in the Notes to Consolidated Financial Statements for additional information regarding these assets.

The carrying value of other intangible assets as of December 31, 2018, was $32.4 million and $58.6 million for the Distribution and Aerospace segments, respectively. During the third quarter of 2018, management identified a triggering event for possible impairment at a certain asset group in its U.K. business based on a review of historical performance, the current forecast for the remainder of the year and the loss of future orders from one of its significant customers, requiring the Company to evaluate the intangible assets for impairment. See Note 10, Goodwill and Other Intangible Assets, Net, in the Notes to Consolidated Financial Statements for additional information regarding these assets.

Judgment and Uncertainties

In years that management performs a qualitative assessment we consider the following qualitative factors: general economic conditions in the markets served by the reporting units carrying goodwill, relevant industry-specific performance statistics, changes in the carrying value of the individual reporting units and assumptions used in the most recent fair value calculation, including forecasted results of operations, the weighted average cost of capital and recent transaction multiples.

For Step 1 of the two-step impairment test, management estimated the fair value of the reporting units using an income methodology based on management's estimates of forecasted cash flows, with those cash flows discounted to present value using rates commensurate with the risks associated with those cash flows. In addition, management used a market-based valuation method involving analysis of market multiples of revenues and earnings before interest, taxes, depreciation and amortization (“EBITDA”) for (i) a group of comparable public companies and (ii) recent transactions, if any, involving comparable companies. In estimating the fair value of the reporting units, a weighting of 80% to the income approach and 20% to the market-based valuation method was selected, consistent with the prior year. A higher weighting was applied to the estimate derived from the income approach as it is based on management's assumptions specific for the reporting units, which are the outcome of an internal planning process. While the selected companies in the market based valuation method have comparability to the reporting units, they may not fully reflect the market share, product portfolio and operations of the reporting units. The estimated fair value of the reporting units is adjusted for an excess net working capital assumption, which represents management's identification of specific contract-related assets that will generate cash flows in the future.

In performing our step one test for the reporting units, we assumed terminal growth rates ranging from 2.5% - 3.0%. The discount rate utilized to reflect the risk and uncertainty in the financial markets and specifically in our internally developed earnings projections ranged from 9.8% - 12.5% for these reporting units. Changes in these estimates and assumptions could materially affect the results of our tests for goodwill impairment.

Under Step 2, an impairment loss is recognized for any excess of the carrying amount of the reporting unit’s goodwill over the implied fair value of that goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation. The residual fair value after this allocation is the implied fair value of the reporting unit goodwill. The results of the Step 1 tests indicated that the Company did not need to proceed to Step 2 for either of the reporting units tested.

Effect if Actual Results Differ From Assumptions

We performed the Step 1 test for the Distribution and Aerosystems reporting units. Distribution's fair value exceeded the carrying value in excess of 72% and Aerosystems' fair value exceeded the carrying value by approximately 17%. A one percentage point decrease in our terminal growth rate or an increase of one percentage point in our discount rate would not result in a fair value calculation less than the carrying value for these reporting units.

During the third quarter of 2018, we identified a triggering event for possible impairment at a certain asset group in our U.K. business based on a review of its historical performance, the current forecast for the remainder of the year and the loss of future orders from one of our significant customers, requiring us to evaluate the intangible assets for impairment. We performed a recoverability test on the intangibles for a certain asset group in our U.K. business by comparing the undiscounted cash flows of the asset group to its carrying value, and the estimated future cash flows of the business did not exceed the carrying value of the assets. Based on these results, we calculated the fair value of the asset group using an income approach, which resulted in an impairment charge of $10.0 million, or the remaining balance of the customer lists/relationships at a certain asset group within the U.K. business. This charge has been included in the operating results of the Aerospace segment.

As with all assumptions, there is an inherent level of uncertainty and actual results, to the extent they differ from those assumptions, could have a material impact on fair value. For example, multiples for similar type reporting units could deteriorate due to changes in technology or a downturn in economic conditions. A reduction in customer demand would impact our assumed growth rate resulting in a reduced fair value. Potential events or circumstances could have a negative effect on the estimated fair value. The loss of a major customer or program could have a significant impact on the future cash flows of the reporting unit(s). Advances in technology by our competitors could result in our products becoming obsolete.

We do not currently believe there to be a reasonable likelihood that actual results will vary materially from estimates and assumptions used to test goodwill and other intangible assets for impairment losses. However, if actual results are not consistent with our estimates or assumptions, we may be exposed to an impairment charge that could be material. Our estimates of the fair value of the Aerosystems reporting unit include estimated cash flows related to the continued production and sale of the K-MAX aircraft, including derivative technologies, spares sales and support.

Long-Term Incentive Programs

Methodology

The Company maintains a Management Incentive Plan, which provides for cash and share-based payment awards, including non-statutory stock options, restricted stock, stock appreciation rights and long-term incentive program ("LTIP") awards. We determine the fair value of our non-qualified stock option awards at the date of grant using a Black-Scholes model. We determine the fair value of our restricted share awards at the date of grant using an average of the high and low market price of our stock.

LTIP awards provide certain senior executives an opportunity to receive award payments, generally in cash. Prior to 2018, performance was based on the Company's financial results compared to the Russell 2000 indices for the same periods based upon the following metrics: (a) average return on total capital, (b) average earnings per share growth and (c) total return to shareholders for the performance period. Beginning in 2018, the performance metrics were changed to the following: (a) average return on total capital and (b) total return to shareholders, both compared to the Russell 2000 indices for the same performance period. No awards will be payable if the Company's performance is below the 25th percentile of the designated indices. The maximum award is payable if performance reaches the 75th percentile of the designated indices. Awards will be paid out at 100% at the 50th percentile. Awards for performance between the 25th and 75th percentiles are determined by straight-line interpolation between 0% and 200%.

In order to estimate the liability associated with LTIP awards, management must make assumptions as to how our current performance compares to current Russell 2000 data based upon the Russell 2000's historical results. This analysis is performed on a quarterly basis. When sufficient Russell 2000 data for a year is available, which typically will not be until May or June of the following year, management will adjust the liability to reflect its best estimate of the total award. Actual results could differ significantly from management's estimates. The total estimated liability as of December 31, 2018, was $18.9 million.

Judgment and Uncertainties

Option-pricing models and generally accepted valuation techniques require management to make assumptions and to apply judgment to determine the fair value of our awards. These assumptions and judgments include estimating the future volatility of our stock price, expected dividend yield, future employee turnover rates and future employee stock option exercise behaviors. Changes in these assumptions can materially affect the fair value estimate.

Our LTIP requires management to make assumptions regarding the likelihood of achieving long-term Company goals as well as estimate future Russell 2000 results.

Effect if Actual Results Differ From Assumptions

We do not currently believe there is a reasonable likelihood that there will be a material change in the estimates or assumptions we use to determine cash and share-based compensation expense. However, if actual results are not consistent with our estimates or assumptions, we may be exposed to changes in cash and share-based compensation expense that could be material.

If actual results are not consistent with the assumptions used, the share-based compensation expense reported in our financial statements may not be representative of the actual economic cost of the share-based compensation. A 10% change in our share-based compensation expense for the year ended December 31, 2018, would have affected pre-tax earnings by approximately $0.7 million in 2018.

Due to the timing of availability of the Russell 2000 data, there is a risk that the amount we have recorded as LTIP expense could be different from the actual payout. A 10.0 percentage point increase in the total estimated liability for our LTIP would result in a reduction of 2018 pretax earnings of $1.9 million.

Pension Plans

Methodology

We maintain a qualified defined benefit pension, as well as a non-qualified Supplemental Employees Retirement Plan ("SERP") for certain key executives. See Note 15, Pension Plans, in the Notes to Consolidated Financial Statements included in this Form 10-K for further discussion of these plans.

Expenses and liabilities associated with each of these plans are determined based upon actuarial valuations. Integral to these actuarial valuations are a variety of assumptions including expected return on plan assets and discount rates. We regularly review these assumptions, which are updated at the measurement date, December 31st. In accordance with generally accepted accounting principles, the impact of differences between actual results and the assumptions are accumulated and generally amortized over future periods, which will affect expense recognized in future periods.

We utilize a "spot rate approach" in the calculation of pension interest and service cost. The spot rate approach applies separate discount rates for each projected benefit payment in the calculation of pension interest and service cost.

Judgment and Uncertainties

The discount rate represents the interest rate used to determine the present value of future cash flows currently expected to be required to settle the pension obligation. Management uses the Financial Times Stock Exchange ("FTSE") Pension Liability Index for discount rate assumptions. This index was designed to provide a market average discount rate to assist plan sponsors in valuing the liabilities associated with postretirement obligations. Additionally, we reviewed the changes in the general level of interest rates since the last measurement date noting that overall rates had increased when compared to 2017.

Based upon this information, we used a 4.17% discount rate as of December 31, 2018, for the qualified defined benefit pension plan. This rate takes into consideration the participants in our pension plan and the anticipated payment stream as compared to the Above Median Double-A Curve. For the SERP, we used the same methodology as the pension plan and derived a discount rate of 3.88% in 2018 for the benefit obligation. The difference in the discount rates is primarily due to the expected duration of SERP payments, which is shorter than the anticipated duration of benefit payments to be made to the average participant in the pension plan. The qualified defined benefit pension plan and SERP used discount rates of 3.50% and 3.15% at December 31, 2017, respectively, for purposes of calculating the benefit obligation.

The expected long-term rate of return on plan assets of 7.5% represents the average rate of earnings expected on the funds invested to provide for anticipated benefit payments. The expected return on assets assumption is developed based upon several factors. Such factors include current and expected target asset allocation, our historical experience of returns by asset class type, a risk premium and an inflation estimate.

Effect if Actual Results Differ From Assumptions

A lower discount rate increases the present value of benefit obligations and increases pension expense. A one percentage point decrease in the assumed discount rate would have increased pension expense in 2018 by $6.0 million. A one percentage point increase in the assumed discount rate would have decreased pension expense in 2018 by $5.3 million.

A lower expected rate of return on pension plan assets would increase pension expense. For 2018 and 2017, the expected rate of return on plan assets was 7.5%. A one-percentage point increase/decrease in the assumed return on pension plan assets would have changed pension expense in 2018 by approximately $6.4 million. During 2018, the actual return on pension plan assets of (7.2)% was lower than our expected long-term rate of return on pension plan assets of 7.5%.

Income Taxes

Methodology

Deferred tax assets and liabilities generally represent temporary differences between the recognition of tax benefits/expenses in our financial statements and the recognition of these tax benefits/expenses for tax purposes.

We establish reserves for deferred taxes when, despite our belief that our tax return positions are valid and defensible, we believe that certain positions may not prevail if challenged. We adjust these reserves in light of changing facts and circumstances, such as the progress of a tax audit or changes in tax legislation. Our effective tax rate includes the impact of reserve provisions and changes to reserves that we consider appropriate. This rate is then applied to our quarterly operating results. In the event that there is a significant unusual or one-time item recognized in our operating results, the tax attributable to that item would be separately calculated and recorded at the same time as the unusual or one-time item.

As of December 31, 2018, we had recognized $17.4 million of deferred tax assets, net of valuation allowances. A portion of this amount, $1.3 million, is related to a capital loss recorded on the disposition of our Distribution segment's Mexico operations. The realization of these benefits is dependent in part on future taxable capital gains and tax planning strategies designed to realize the benefit associated with the capital loss. For those jurisdictions where the expiration of tax loss or credit carryforwards or the projection of operating results indicates that realization is not likely, a valuation allowance is provided.

Judgment and Uncertainties

Management believes that sufficient income will be earned in the future to realize deferred income tax assets, net of valuation allowances recorded. The realization of these deferred tax assets can be impacted by changes to tax laws or statutory tax rates and future taxable income levels.

Our effective tax rate on earnings was 28.0% for 2018. This rate was favorably impacted by the rate reduction resulting from the Tax Cuts and Jobs Act of 2017; however, it was partially offset by foreign losses of $2.7 million for which no tax benefit was recorded. Our effective tax rate is based on expected or reported income or loss, statutory tax rates and tax planning opportunities available to us in the various jurisdictions in which we operate. Significant judgment is required in determining our effective tax rate and in evaluating our tax positions.

Effect if Actual Results Differ From Assumptions

We do not anticipate a significant change in our unrecognized tax benefits within the next twelve months. We file tax returns in numerous U.S. and foreign jurisdictions, with returns subject to examination for varying periods, but generally back to and including 2013. It is our policy to record interest and penalties on unrecognized tax benefits as income taxes. A one percentage point increase/decrease in our tax rate would have affected our 2018 earnings by $0.8 million.

Environmental Costs

Methodology

Our operations are subject to environmental regulation by federal, state and local authorities in the United States and regulatory authorities with jurisdiction over our foreign operations. As a result, we have established and update, as necessary, policies relating to environmental standards of performance for our operations worldwide.

When we become aware of an environmental risk, we perform a site study to ascertain the potential magnitude of contamination and the estimated cost of remediation.

We continually evaluate the identified environmental issues to ensure the time to complete the remediation and the total cost of remediation are consistent with our initial estimate. If there is any change in the cost and/or timing of remediation, the accrual is adjusted accordingly.

Judgment and Uncertainties

Environmental costs are accrued when it is probable that a liability has been incurred and the amount can be reasonably estimated. The most likely cost to be incurred is accrued based on an evaluation of currently available facts with respect to each individual site, including existing technology, current laws and regulations and prior remediation experience. Conditions of the site must be monitored throughout the remediation process as numerous factors could affect the estimated liability, including, but not limited to, the discovery of geological formations affecting the behavior or movement of contaminants; soil conditions

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and soil chemistry affecting the degradation of contaminants; or the discovery of further sources or types of contaminants. Liabilities with fixed or readily determinable payment dates are discounted.
We believe that expenditures necessary to comply with the present regulations governing environmental protection will not have a material effect upon our competitive position, consolidated financial position, results of operations or cash flows.
Effect if Actual Results Differ From Assumptions
At December 31, 2018, amounts accrued for known environmental remediation costs were $5.5 million. A 10% change in this accrual would have impacted pre-tax earnings by $0.6 million. Further information about our environmental costs is provided in Note 11, Environmental Costs, in the Notes to Consolidated Financial Statements.
RECENT ACCOUNTING STANDARDS

A summary of recent accounting standards is included in Note 1, Summary of Significant Accounting Policies, in the Notes to Consolidated Financial Statements, included in Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

SELECTED QUARTERLY FINANCIAL DATA

2018	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
	(in thousands, except per share amounts)				
Net sales	$463,327	$468,129	$443,058	$500,911	$1,875,425
Gross profit	134,107	135,643	128,558	151,729	550,037
Net earnings	14,066	15,094	1,432	23,577	54,169
Basic earnings per share	0.51	0.54	0.05	0.84	1.94
Diluted earnings per share	0.50	0.53	0.05	0.84	1.92

2017	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
	(in thousands, except per share amounts)				
Net sales	$435,941	$449,006	$447,046	$473,916	$1,805,909
Gross profit	124,346	134,493	138,465	148,287	545,591
Net earnings	6,291	13,458	16,280	13,797	49,826
Basic earnings per share	0.23	0.49	0.58	0.50	1.80
Diluted earnings per share	0.22	0.48	0.58	0.49	1.75

Included within certain quarterly results are a variety of unusual or significant adjustments that may affect comparability. The most significant of such adjustments are described below as well as within Management’s Discussion and Analysis of Financial Condition and Results of Operations and the Notes to Consolidated Financial Statements. Additionally, due to the nature of the earnings per share calculation, the sum of quarterly earnings per share data may not equal the cumulative earnings per share data for the year.

Items within the 2018 quarterly results that may affect comparability are as follows:

2018	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
	(in thousands)				
Non-cash intangible asset impairment charge	$—	$—	$10,039	$—	$10,039
Non-cash write-off of inventory	$—	$—	$709	$—	$709
Employee tax-related matters in foreign operations	$—	$—	$1,279	$1,761	$3,040
Cost associated with corporate development activities	$—	$—	$2,162	$1,247	$3,409
Gain on the sale of land	$—	$(1,520)	$—	$—	$(1,520)
Restructuring and severance costs	$1,693	$1,954	$1,657	$2,704	$8,008
Loss on sale of U.K. Tooling business	$—	$—	$—	$5,722	$5,722
Loss on sale of assets and liabilities of Engineering Services business	$—	$—	$—	$661	$661

Items within the 2017 quarterly results that may affect comparability are as follows:

2017	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
	(in thousands)				
Tax expense associated with the revaluation of U.S deferred tax assets due to Tax Reform	$—	$ —	$—	$9,733	$9,733
Costs associated with Distribution productivity initiatives	$496	$ 577	$514	$544	$2,131
Restructuring and severance costs	$579	$ 42	$4,719	$1,123	$6,463

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We have various market risk exposures that arise from our ongoing business operations. Market risk is the potential economic loss that may result from adverse changes in the fair value of financial instruments. Our financial results are impacted by changes in interest rates, certain foreign currency exchange rates and commodity prices.

Foreign Currencies

We have manufacturing, sales and distribution facilities in various locations throughout the world. As a result, we make investments and conduct business transactions denominated in various currencies, including the U.S. dollar, the British pound, the European euro, the Czech koruna, the Japanese yen and the Indian rupee. Total annual foreign sales, including foreign export sales, averaged approximately $320.7 million over the last three years. Foreign sales represented 15.8% of consolidated net sales in 2018. We estimate a hypothetical 10% adverse change in foreign currency exchange rates relative to the U.S dollar for 2018 would have had an unfavorable impact of $13.1 million on sales and a favorable impact of $2.1 million on operating income. We manage foreign currency exposures that are associated with committed foreign currency purchases and sales and other assets and liabilities created in the normal course of business at the subsidiary operations level. Sometimes we may, through the use of forward contracts or other derivative contracts, hedge the price risk associated with committed and forecasted foreign denominated payments and rates. Historically the use of these forward contracts has been minimal. We do not use derivatives for speculative or trading purposes.

Interest Rates

Our primary exposure to interest rate risk results from our outstanding debt obligations. The level of fees and interest charged on revolving credit commitments and borrowings are based upon leverage levels and market interest rates.

Our principal debt facilities are contained within a variable rate credit agreement that provides a $600.0 million revolving credit facility and a $100.0 million term loan commitment. Both these agreements were amended and restated on May 6, 2015 (as amended), and expire on May 6, 2020. Total average bank borrowings for 2018 were $151.6 million. The impact of a hypothetical 100 basis point increase in the interest rates on our average bank borrowings would have resulted in a $1.5 million increase in interest expense.

During the fiscal quarter ended June 30, 2017, we issued $200.0 million aggregate principal of convertible unsecured senior notes, due May 2024, in a private placement offering. These notes bear 3.25% interest per annum on the principal amount, payable semiannually in arrears on May 1 and November 1 of each year, beginning on November 1, 2017, and have an effective interest rate of 5.0%.

From time to time we will enter into interest rate swap contracts for the purpose of securing a fixed interest rate on our variable interest rate borrowings. These contracts allow us to create certainty with respect to future cash flows associated with our variable rate debt that would otherwise be impacted by fluctuations in LIBOR rates.

Commodity Prices

We are exposed to volatility in the price of raw materials used in certain manufacturing operations as well as a variety of items procured by our distribution business. These raw materials include, but are not limited to, aluminum, titanium, nickel, copper and other specialty metals. We manage our exposure related to these price changes through strategic procurement practices.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Kaman Corporation:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Kaman Corporation and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of operations, of comprehensive income, of shareholders' equity, and of cash flows for each of the three years in the period ended December 31, 2018, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2018 appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Change in Accounting Principles

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for revenues from contracts with customers and its presentation of pension and postretirement benefit costs in 2018.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

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

/s/ PricewaterhouseCoopers LLP

Hartford, Connecticut
February 25, 2019

We have served as the Company’s auditor since 2013.

CONSOLIDATED BALANCE SHEETS
KAMAN CORPORATION AND SUBSIDIARIES
(In thousands, except share and per share amounts)

	December 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 27,711	$ 36,904
Accounts receivable, net	301,094	313,451
Contract assets	108,861	—
Contract costs, current portion	5,993	—
Inventories	294,912	367,437
Income tax refunds receivable	1,752	2,889
Other current assets	32,782	27,188
Total current assets	773,105	747,869
Property, plant and equipment, net of accumulated depreciation of $262,306 and $252,611, respectively	184,224	185,452
Goodwill	345,365	351,717
Other intangible assets, net	91,007	117,118
Deferred income taxes	24,437	27,603
Contract costs, noncurrent portion	10,666	—
Other assets	31,509	25,693
Total assets	$ 1,460,313	$ 1,455,452
Liabilities and Shareholders' Equity		
Current liabilities:		
Current portion of long-term debt, net of debt issuance costs	$ 9,375	$ 7,500
Accounts payable – trade	158,627	127,591
Accrued salaries and wages	46,634	48,352
Contract liabilities, current portion	28,865	—
Advances on contracts	—	8,527
Income taxes payable	139	1,517
Other current liabilities	54,836	52,812
Total current liabilities	298,476	246,299
Long-term debt, excluding current portion, net of debt issuance costs	284,256	391,651
Deferred income taxes	7,027	8,024
Underfunded pension	104,988	126,924
Contract liabilities, noncurrent portion	78,562	—
Other long-term liabilities	53,847	46,898
Commitments and contingencies (Note 17)		
Shareholders' equity:		
Preferred stock, $1 par value, 200,000 shares authorized; none outstanding	—	—
Common stock, $1 par value, 50,000,000 shares authorized; voting; 29,544,714 and 29,141,467 shares issued, respectively	29,545	29,141
Additional paid-in capital	200,474	185,332
Retained earnings	610,103	587,877
Accumulated other comprehensive income (loss)	(134,898)	(115,814)
Less 1,672,917 and 1,325,975 shares of common stock, respectively, held in treasury, at cost	(72,067)	(50,880)
Total shareholders' equity	633,157	635,656
Total liabilities and shareholders' equity	$ 1,460,313	$ 1,455,452

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF OPERATIONS
KAMAN CORPORATION AND SUBSIDIARIES
(In thousands, except per share amounts)

	For the Year Ended December 31,		
	2018	2017	2016
Net sales	$1,875,425	$1,805,909	$1,808,376
Cost of sales	1,325,388	1,260,318	1,260,855
Gross profit	550,037	545,591	547,521
Selling, general and administrative expenses	444,904	432,067	443,704
Other intangible assets impairment (Note 10)	10,039	—	—
Restructuring costs (Note 3)	8,008	2,661	1,032
Loss on sale of business (Note 3)	5,722	—	—
Net (gain) loss on sale of assets	(1,700)	(256)	11
Operating income	83,064	111,119	102,774
Interest expense, net	20,097	20,581	15,747
Non-service pension and post retirement benefit income	(12,127)	(3,056)	(3,149)
Other (income) expense, net	(143)	(784)	472
Earnings before income taxes	75,237	94,378	89,704
Income tax expense	21,068	44,552	30,850
Net earnings	$54,169	$49,826	$58,854
Earnings per share:			
Basic earnings per share	$1.94	$1.80	$2.17
Diluted earnings per share	$1.92	$1.75	$2.10
Weighted average shares outstanding:			
Basic	27,945	27,611	27,107
Diluted	28,223	28,418	28,072

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
KAMAN CORPORATION AND SUBSIDIARIES
(In thousands)

	For the Year Ended December 31,		
	2018	2017	2016
Net earnings	$54,169	$49,826	$58,854
Other comprehensive income, net of tax:			
Foreign currency translation adjustments, net	(7,527)	27,840	(12,271)
Change in unrealized loss on derivative instruments, net of tax expense of $1, $31, and $6, respectively	2	51	9
Pension plan adjustments, net of tax (benefit) expense of ($3,701), $7,661, and ($2,412), respectively	(11,559)	12,688	(3,993)
Other comprehensive (loss) income	$(19,084)	$40,579	$(16,255)
Total comprehensive income	$35,085	$90,405	$42,599

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
KAMAN CORPORATION AND SUBSIDIARIES
(In thousands, except share amounts)

	Common Stock		Additional Paid-In	Retained	Accumulated Other Comprehensive	Treasury Stock		Total Shareholders'
	Shares	$	Capital	Earnings	Income (Loss)	Shares	$	Equity
Balance at December 31, 2015	27,735,757	$27,736	$156,803	$520,865	$ (140,138)	698,183	$(22,189)	$543,077
Net earnings	—	—	—	58,854	—	—	—	58,854
Other comprehensive income	—	—	—	—	(16,255)	—	—	(16,255)
Dividends (per share of common stock, $0.72)	—	—	—	(19,519)	—	—	—	(19,519)
Amounts reclassified to temporary equity			(1,797)					(1,797)
Purchase of treasury shares	—	—	—	—	—	316,545	(13,792)	(13,792)
Employee stock plans	344,221	344	10,541	—	—	28,672	(1,352)	9,533
Share-based compensation expense	82,519	82	5,615	—	—	10,964	(11)	5,686
Balance at December 31, 2016	28,162,497	$28,162	$171,162	$560,200	$ (156,393)	1,054,364	$(37,344)	$565,787
Net earnings	—	—	—	49,826	—	—	—	49,826
Other comprehensive income	—	—	—	—	40,579	—	—	40,579
Dividends (per share of common stock, $0.80)	—	—	—	(22,149)	—	—	—	(22,149)
Amounts reclassified to temporary equity	—	—	1,797	—	—	—	—	1,797
Changes due to convertible notes transactions	624,044	624	(2,582)	—	—	—	—	(1,958)
Purchase of treasury shares	—	—	—	—	—	218,235	(11,552)	(11,552)
Employee stock plans	265,886	266	9,074	—	—	39,647	(1,970)	7,370
Share-based compensation expense	89,040	89	5,881	—	—	13,729	(14)	5,956
Balance at December 31, 2017	29,141,467	$29,141	$185,332	$587,877	$ (115,814)	1,325,975	$(50,880)	$635,656
Net earnings	—	—	—	54,169	—	—	—	54,169
Impact of change in revenue accounting standard				(9,584)				(9,584)
	—	—	—	—	(19,084)	—	—	(19,084)

Other comprehensive income								
Dividends (per share of common stock, $0.80)	—	—	—	(22,359)	—	—	—	(22,359)
Changes due to convertible notes transactions	114,778	115	(123)	—	—	—	—	(8)
Purchase of treasury shares	—	—	—	—	—	313,330	(19,489)	(19,489)
Employee stock plans	226,722	227	8,813	—	—	25,069	(1,689)	7,351
Share-based compensation expense	61,747	62	6,452	—	—	8,543	(9)	6,505
Balance at December 31, 2018	29,544,714	$29,545	$200,474	$610,103	$(134,898)	1,672,917	$(72,067)	$633,157

See accompanying notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS
KAMAN CORPORATION AND SUBSIDIARIES
(In thousands)

	For the Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net earnings	$54,169	$49,826	$58,854
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	42,029	42,471	43,393
Amortization of debt issuance costs	1,806	2,014	1,536
Accretion of convertible notes discount	2,596	3,410	2,144
Provision for doubtful accounts	1,123	1,094	2,635
Loss on sale of business	5,722	—	—
Net (gain) loss on sale of assets	(1,700)	(256)	11
Other intangible assets impairment	10,039	—	—
Loss on debt extinguishment	—	137	—
Net loss (gain) on derivative instruments	829	(1,126)	1,007
Stock compensation expense	6,505	5,956	5,686
Deferred income taxes	10,417	24,555	7,928
Changes in assets and liabilities, excluding effects of acquisitions/divestitures:			
Accounts receivable	(19,398)	(77,560)	(778)
Contract assets	(27,595)	—	—
Contract costs	(5,834)	—	—
Inventories	(4,599)	31,095	(11,891)
Income tax refunds receivable	1,136	3,180	(2,474)
Other assets	(7,316)	1,747	4,859
Accounts payable - trade	30,177	10,164	693
Contract liabilities	96,034	—	—
Accrued contract losses	(5)	(957)	745
Accrued restructuring costs	(355)	1,122	(1,029)
Advances on contracts	—	(4,829)	2,082
Other current liabilities	1,942	(366)	2,078
Income taxes payable	(2,915)	212	351
Pension liabilities	(38,179)	(11,318)	(9,087)
Other long-term liabilities	5,740	(686)	(1,036)
Net cash provided by operating activities	162,368	79,885	107,707
Cash flows from investing activities:			
Proceeds from sale of assets	2,905	618	201
Expenditures for property, plant & equipment	(29,871)	(27,631)	(29,777)
Acquisition of businesses including earn out adjustments, net of cash acquired	—	(1,365)	(6,631)
Other, net	(2,995)	(3,457)	(1,376)
Cash used in investing activities	(29,961)	(31,835)	(37,583)
Cash flows from financing activities:			
Net repayments under revolving credit agreements	(98,087)	(75,988)	(15,147)
Debt repayment	(7,500)	(6,875)	(5,000)
Proceeds from issuance of 2024 convertible notes	—	200,000	—
Repayment of 2017 convertible notes	—	(175,151)	—
Purchase of capped call - 2024 convertible notes	—	(20,500)	—
Proceeds from bond hedge settlement - 2017 convertible notes	—	58,564	—

Net change in bank overdraft	(422)	(1,146)	275
Proceeds from exercise of employee stock awards	7,351	7,370	9,533
Purchase of treasury shares	(19,278)	(11,552)	(13,792)
Dividends paid	(22,349)	(21,462)	(19,510)
Debt and equity issuance costs	—	(7,473)	—
Other	(1,077)	(523)	(318)
Net cash used in financing activities	(141,362)	(54,736)	(43,959)
Net (decrease) increase in cash and cash equivalents	(8,955)	(6,686)	26,165
Effect of exchange rate changes on cash and cash equivalents	(238)	2,385	(1,422)
Cash and cash equivalents at beginning of period	36,904	41,205	16,462
Cash and cash equivalents at end of period	$27,711	$36,904	$41,205

See accompanying notes to consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Kaman Corporation, headquartered in Bloomfield, Connecticut, was incorporated in 1945 and is a diversified company that conducts business in the aerospace and distribution markets. Kaman Corporation reports information for itself and its subsidiaries (collectively, the "Company") in two business segments, Distribution and Aerospace.

Basis of Presentation

The accompanying consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. Certain amounts in prior year financial statements and notes thereto have been reclassified to conform to current year presentation.

Use of Estimates

The preparation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Significant items subject to such estimates and assumptions include the carrying amount of property, plant and equipment, goodwill and other intangible assets; valuation allowances for receivables, inventories and income taxes; valuation of share-based compensation; vendor incentives; assets and obligations related to employee benefits; estimates of environmental remediation costs; and accounting for long-term contracts including claims. Actual results could differ from those estimates.

Foreign Currency Translation

The Company has certain operations outside the United States that prepare financial statements in currencies other than the U.S. dollar. For these operations, results of operations and cash flows are translated using the average exchange rate throughout the period. Assets and liabilities are generally translated at end of period rates. The gains and losses associated with these translation adjustments are included as a component of accumulated other comprehensive income (loss) in shareholders' equity.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of trade accounts receivable. The carrying amounts of these items, as well as trade accounts payable and notes payable, approximate fair value due to the short-term maturity of these instruments. At December 31, 2018, no individual customer accounted for more than 10% of consolidated accounts receivable. At December 31, 2017, one individual customer accounted for more than 10% of consolidated accounts receivable. At December 31, 2018 and 2017, no individual customer accounted for more than 10.0% of consolidated net sales. Foreign sales were approximately 15.8%, 18.8% and 18.1% of the Company's net sales in 2018, 2017 and 2016, respectively, and are concentrated in the United Kingdom, Germany, Canada, France, Switzerland, New Zealand, the Middle East and Asia.

Additional Cash Flow Information

Non-cash investing activities in 2018 include an accrual of $3.5 million for purchases of property and equipment (including capital lease obligations) and a note receivable with a present value of $2.5 million for the amounts to be collected associated with the sale of the U.K. Tooling business. Non-cash financing activities in 2018 include 114,778 common shares issued for the unwind of the remaining warrant transactions associated with the 2017 Notes during the first half of 2018 that had a value of approximately $7.6 million. Other non-cash financing activities in 2018 include an adjustment to other comprehensive income related to the underfunding of the pension and SERP plans and changes in the fair value of derivative financial instruments that qualified for hedge accounting. The total net adjustment was $11.6 million, net of tax of $3.7 million. Additionally, non-cash financing activities in 2018 include $5.6 million of dividends declared but not yet paid.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Additional Cash Flow Information - continued

Non-cash investing activities in 2017 include an accrual of $3.6 million for purchases of property and equipment (including capital lease obligations). Non-cash financing activities in 2017 include 624,044 common shares issued for the partial unwind of warrant transactions during the second quarter of 2017 that had a value of approximately $30.3 million, the receipt of 136,369 shares with an approximate value of $7.5 million to unwind the remaining bond hedge transactions during the fourth quarter of 2017 and the issuance to bond holders of 136,347 shares with an approximate value of $7.5 million upon conversion of the remaining 2017 Notes. Other non-cash financing activities in 2017 include an adjustment to other comprehensive income related to the underfunding of the pension and SERP plans and changes in the fair value of derivative financial instruments that qualified for hedge accounting. The total net adjustment was $12.7 million, net of tax of $7.7 million. Additionally, non-cash financing activities in 2017 include $5.6 million of dividends declared but not yet paid.

Non-cash investing activities in 2016 include an accrual of $2.3 million for purchases of property and equipment (including capital lease obligations), $1.4 million in earn-out payments to the former owners of an aerospace acquisition and an adjustment of $0.2 million for a certain tax matter. Non-cash financing activities in 2016 include an adjustment to other comprehensive income related to the underfunding of the pension and SERP plans and changes in the fair value of derivative financial instruments that qualified for hedge accounting. The total net adjustment was $4.0 million, net of tax of $2.5 million. Additionally, non-cash financing activities in 2016 include $4.9 million of dividends declared but not yet paid.

The Company describes its pension obligations in more detail in Note 15, Pension Plans. The Company describes the convertible notes transactions in more detail in Note 12, Debt.

Revenue Recognition

Under ASC 606, the amount of revenue recognized for any goods or services reflects the consideration that the Company expects to be entitled to receive in exchange for these goods or services. To achieve this core principle, the Company applies the following five step approach: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to performance obligations in the contract; and (5) recognize revenue when or as a performance obligation is satisfied.

A contract is accounted for when there has been approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Performance obligations under a contract are identified based on the goods or services that will be transferred to the customer that are both capable of being distinct and are distinct in the context of the contract. In certain instances, the Company has concluded distinct goods or services should be accounted for as a single performance obligation when they are a series of distinct goods or services that have the same pattern of transfer to the customer. To the extent a contract includes multiple promised goods or services, the Company must apply judgment to determine whether the customer can benefit from the goods or services either on their own or together with other resources that are readily available to the customer (the goods or services are distinct) and if the promise to transfer the goods or services to the customer is separately identifiable from other promises in the contract (the goods or services are distinct in the context of the contract). If these criteria are not met, the promised services are accounted for as a single performance obligation. The transaction price is determined based on the consideration that the Company will be entitled to in exchange for transferring goods or services to the customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price, generally utilizing the expected value method. Determining the transaction price requires significant judgment. If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation based on a relative standalone selling price basis. Standalone selling price is determined by the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, the Company estimates the standalone selling price by taking into account available information such as market conditions and internally approved pricing guidelines related to the performance obligations. Performance obligations are satisfied either over time or at a point in time as discussed in further detail below. In addition, the Company's contracts with customers generally do not include significant financing components or non-cash consideration.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Revenue Recognition - continued

In certain instances, the Company has accounted for contracts using the portfolio approach, a practical expedient permissible under the standard. The determination of when the use of the portfolio approach is appropriate requires judgment from management based on consideration of all the facts and circumstances. The Company uses the portfolio approach when the effect of accounting for a group of contracts or a group of performance obligations would not differ materially from considering each contract or performance obligation separately. This determination requires the use of estimates and assumptions that reflect the size and composition of the portfolio. The Company primarily uses the portfolio approach within its over time revenue streams throughout the Distribution segment as well as for its commercial and defense bearings and structures businesses in the Aerospace segment. The Company's primary criteria considered when using the portfolio approach is the commonality of economic factors, which generally follow the product type based on consistent production costs and standard pricing for the products.

Distribution segment

The Distribution segment has historically recognized the majority of its revenue when the sales price was fixed, collectability was reasonably assured and the product's title and risk of loss had transferred to the customer. This method of revenue recognition remains substantially the same as revenue is recognized at the point in time when title transfers to the customer, as this is when the performance obligations are generally controlled by the customer. A small percentage of revenue within the Distribution segment, specifically certain contracts for value-add services, engineering services and repairs, are accounted for over time under ASC 606. For the over time contracts within the Distribution segment, revenue is recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the products or services to be provided.

The Company generally uses the cost-to-cost measure of progress for its over time contracts because it best depicts the transfer of assets to the customer which occurs as cost is incurred under the contracts. Under the cost-to-cost method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. The Company performs detailed quarterly reviews of the progress and execution of its performance obligations under certain larger contracts. As part of this process, management reviews information, primarily its estimated costs at completion and costs incurred to date by its vendors as a majority of production costs at the segment are incurred by third party vendors. These estimated costs are included in the calculation of the measures of progress towards completion.

Additionally, the Company includes freight costs charged to customers in net sales and the correlating expense as a cost of sales. Sales tax collected from customers is excluded from net sales in the Company's Consolidated Statements of Operations.

Aerospace segment

The majority of long-term contracts in the Aerospace segment were historically accounted for under the percentage-of-completion method using units-of-delivery as a measurement basis. Many of these contracts moved to an over time revenue model under ASC 606. For example, revenue for the Company's Joint Programmable Fuze ("JPF") program with the U.S. Government ("USG") moved from percentage-of-completion using units-of-delivery as the measurement basis to the over time revenue recognition model using input costs as the basis for recognizing progress to completion. Conversely, revenue for the K-MAX® program moved from cost-to-cost revenue recognition under percentage-of-completion accounting to the point-in-time method, with revenue on these aircraft being recognized upon acceptance by the end customer. For certain programs, early-contract unit costs in excess of the average expected cost over the life of the contract and contractually recoverable general and administrative costs were previously capitalized and amortized over the period of performance of the contract. With the adoption of this standard update, $32.5 million of previously capitalized deferred costs in excess of the contract average and previously contractually recoverable general and administrative costs were adjusted within the cumulative effect to retained earnings and will not be amortized into earnings after January 1, 2018.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Revenue Recognition - continued

Aerospace segment - continued

To determine the appropriate revenue recognition model for the Aerospace segment's long-term contracts, the Company evaluates whether a contract exists, considering whether multiple contracts should be combined as one single contract and then whether the contract should be accounted for as more than one performance obligation. This evaluation requires significant judgment, as these decisions could change the amount of revenue and profit recorded in a given period. For certain programs, the Company may promise to provide distinct goods or services within a contract, in which case these are separated into more than one performance obligation.

For certain programs in the Aerospace segment, the Company recognizes revenue over time because of continuous transfer of control to the customer. For USG contracts, this continuous transfer of control to the customer is supported by clauses in the contract that provide lien rights to the customer over the work in progress, thereby control transfers as costs are incurred. For non-USG contracts, the customer typically controls the work in progress because the Company is producing products that do not have an alternative use to the Company and where contractual termination clauses provide the Company rights to payment for work performed to date plus a reasonable profit.

Revenue is recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the products or services to be provided. The Company generally uses the cost-to-cost measure of progress for its contracts because it best depicts the transfer of assets to the customer which occurs as cost is incurred under the contracts. Under the cost-to-cost method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. Total estimated contract costs generally include labor, materials and subcontractors' costs, other direct costs and related overhead costs. These estimates also include the estimated cost of satisfying offset obligations, as required under certain contracts. The complexity of certain programs as well as technical risks and uncertainty as to the future availability of materials and labor resources could affect the Company's ability to accurately estimate future contract costs.

For contracts that recognize revenue over time, the Company performs detailed quarterly reviews of the progress and execution of its performance obligations under these contracts. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities include management's judgment about the ability and cost to achieve the schedule (e.g. the number and type of milestone events), technical requirements (e.g., a newly-developed product versus a mature product) and other contract requirements. Management must make assumptions and estimates regarding labor productivity and availability, the complexity of the work to be performed, the availability of materials, the length of time to complete the performance obligation (e.g. to estimate increases in wages and prices for materials and related support cost allocations), execution by subcontractors, the availability and timing of funding from customers and overhead cost rates, among other variables. Based upon these reviews, the Company will record the effects of adjustments in profit estimates each period. If at any time management determines that in the case of a particular contract total costs will exceed total contract revenue, a provision for the entire anticipated contract loss is recorded at that time. The amount of revenue recognized in the year ended December 31, 2018 from performance obligations satisfied (or partially satisfied) in previous periods was $6.7 million. This amount was primarily related to changes in the estimates of the stage of completion of Aerospace contracts, more specifically the JPF contract with the USG and the AH-1Z contract. For the year ended December 31, 2017, the net increase in our operating income from changes in contract estimates totaled $5.7 million. The increase in 2017 was primarily a result of improved performance on the AH-1Z program, JPF program with the USG and the SH-2G program with Peru. These improvements were partially offset by cost growth on the K-MAX® and A-10 programs. The net decrease in our operating income from changes in contract estimates totaled $0.8 million for the year ended December 31, 2016. The decrease in 2016 was primarily a result of cost growth on various programs, including the Boeing 767/777 program, the A-10 program and certain composite structures and assembly programs. This cost growth was partially offset by improved performance on the JPF program.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Revenue Recognition - continued

Aerospace segment - continued

Due to the nature of the work required to be performed on many of the Company's performance obligations, the estimation of total revenue and cost at completion is complex, subject to many variables and requires significant judgment. From time-to-time the Company enters into long-term contracts with the USG and other customers that contain award fees, incentive fees or other provisions that can either increase or decrease the transaction price. These variable amounts generally are awarded upon achievement of certain performance metrics, program milestones or cost targets and can be based upon customer discretion. The Company estimates variable consideration at the most likely amount to which it expects to be entitled. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of the Company's anticipated performance and all information (historical, current and forecasted) that is reasonably available. The Company does not include financing components as variable consideration if less than one year. At December 31, 2018, the Company did not have any significant financing components.

Contracts are often modified to account for changes in contract specifications and requirements. The Company considers contract modifications to exist when the modification either creates new or makes changes to the existing enforceable rights and obligations. Contract modifications for goods or services that are not distinct from the existing contract are accounted for as if they were part of that existing contract. In these cases, the effect of the contract modification on the transaction price and the measure of progress for the performance obligation to which it relates is recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis, except when such modifications relate to a performance obligation that is a series of substantially the same distinct goods or services. If the modification relates to a performance obligation for a series of substantially the same distinct goods or services, the modification is treated prospectively. Contract modifications for goods or services that are considered distinct from the existing contract are accounted for as separate contracts. The Company applied the practical expedient for any contracts that were modified prior to January 1, 2018; therefore, the contracts were not restated retrospectively for those modifications.

For other contracts within the Aerospace segment, excluding the long-term contracts discussed above, the method of revenue recognition will remain substantially the same under ASC 606. For these contracts, revenue will be primarily recognized at the point in time when the title transfers to the customer, as this is when the performance obligation is controlled by the customer. Additionally, a small percentage of revenue related to certain contracts for repairs and overhauls within the Aerospace segment is accounted for over time under ASC 606. Under these contracts, revenue is generally recognized as work is performed in proportion to the actual costs incurred as compared to total estimated contract costs.

Cost of Sales and Selling, General and Administrative Expenses

Cost of sales includes costs of products and services sold (i.e., purchased product, raw material, direct labor, engineering labor, outbound freight charges, depreciation and amortization, indirect costs and overhead charges). Selling expenses primarily consist of advertising, promotion, bid and proposal, employee payroll and corresponding benefits and commissions paid to sales and marketing personnel. General and administrative expenses primarily consist of employee payroll including executive, administrative and financial personnel and corresponding benefits, incentive compensation, independent research and development, consulting expenses, warehousing costs, depreciation and amortization. Legal costs are expensed as incurred and are generally included in general and administrative expenses. The Aerospace segment previously included general and administrative expenses as an element of program cost and inventory for certain government contracts prior to the adoption of ASC 606.

Certain inventory related costs, including purchasing costs, receiving costs and inspection costs, for the Distribution segment are not included in cost of sales. For the years ended December 31, 2018, 2017 and 2016, $4.2 million, $3.5 million and $3.5 million, respectively, of such costs are included in general and administrative expenses.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, demand deposits and short-term cash investments. These investments are liquid in nature and have original maturities of three months or less. Bank overdraft positions, which occur when total outstanding issued checks exceed available cash balances at a single financial institution at the end of a reporting period, are reclassified to other current liabilities within the consolidated balance sheets. At December 31, 2018 and 2017, the Company had bank overdrafts of $2.7 million and $3.1 million, respectively, included in other current liabilities.

Accounts Receivable

The Company has three types of accounts receivable: (a) Trade receivables, which consist of amounts billed and currently due from customers; (b) USG contracts, which consist of (1) amounts billed, and (2) costs and accrued profit – not billed; and (c) Commercial and other government contracts, which consist of (1) amounts billed, and (2) costs and accrued profit – not billed. The Company's receivables, net, consist of amounts billed and currently due from customers. The amounts due are stated at their net estimated realizable value.

The allowance for doubtful accounts reflects management’s best estimate of probable losses inherent in the trade accounts receivable and billed contracts balance. Management determines the allowance based on known troubled accounts, historical experience and other currently available evidence.

Contract Assets

The Company's contract assets include unbilled amounts typically resulting from sales under long-term contracts when the cost-to-cost method of revenue recognition is applied and revenue recognized exceeds the amount billed to the customer, and right to payment is not just subject to the passage of time. Amounts do not exceed their net realizable value. Contract assets are generally classified as current as such amounts are billable and collectible within twelve months.

Contract Costs

Contract costs consist of costs to obtain and fulfill a contract. Costs to fulfill a contract primarily consist of nonrecurring engineering costs incurred at the start of a new program for which such costs are expected to be recovered under existing and future contracts. Such costs are amortized over the estimated revenue amount of the contract. Costs to obtain a contract consist of commissions and agent fees paid in connection with the award of a contract. If these costs are determined to have an amortization period of less than one year, the Company applies the practical expedient and the related costs are expensed as incurred. If the amortization period is determined to be greater than a year and the incremental costs to obtaining the contract qualify as an asset, then the contract costs are recorded and amortized over the estimated contract revenue.

Inventories

Inventory of merchandise for resale is stated at cost (using the average costing method) or net realizable value, whichever is lower. Contracts and other work in process and finished goods are valued at production cost represented by raw material, labor and overhead. Contracts and other work in process and finished goods are not reported at amounts in excess of net realizable values. The Company includes raw material amounts in the contracts in process and other work in process balances. Raw material includes certain general stock materials but primarily relates to purchases that were made in anticipation of specific programs for which production has not been started as of the balance sheet date.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost. Depreciation is computed primarily on a straight-line basis over the estimated useful lives of the assets. The estimated useful lives for buildings range from 15 to 40 years and for leasehold improvements range from 1 to 20 years, whereas machinery, office furniture and equipment generally have useful lives ranging from 3 to 15 years. At the time of retirement or disposal, the acquisition cost of the asset and related accumulated depreciation are eliminated and any gain or loss is credited to or charged against income.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Property, Plant and Equipment - continued

Long-lived assets, such as property, plant and equipment and purchased intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by an asset to the carrying value of the asset. If the carrying value of the long-lived asset is not recoverable on an undiscounted cash flow basis, impairment is recognized to the extent that the carrying value exceeds its fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary.

Maintenance and repair items are charged against income as incurred, whereas renewals and betterments are capitalized and depreciated.

Goodwill and Other Intangible Assets

Goodwill represents the excess of the aggregate purchase price over the fair value of the net assets acquired in a purchase business combination and is reviewed for impairment at least annually.

Accounting Standards Codification Topic 350, "Intangibles - Goodwill and Other," ("ASC 350") permits the assessment of qualitative factors to determine whether events and circumstances lead to the conclusion that it is necessary to perform the two-step goodwill impairment test required under ASC 350. The qualitative assessment management performs takes into consideration the following factors: general economic conditions, industry specific performance, changes in carrying values of the reporting units or asset groups, the assessment of assumptions used in the previous fair value calculation and changes in transaction multiples.

In the first step of the two-step test, the fair value of the reporting unit is compared with its carrying value (including goodwill). If the fair value of the reporting unit is less than its carrying value, an indication of goodwill impairment exists for the reporting unit and the enterprise must perform step two of the impairment test (measurement). In Step 2, an impairment loss is recognized for any excess of the carrying amount of the reporting unit’s goodwill over the implied fair value of that goodwill. The implied fair value of goodwill is determined by allocating the fair value of the reporting unit in a manner similar to a purchase price allocation. The residual fair value after this allocation is the implied fair value of the reporting unit goodwill.

Fair value of the reporting unit is determined using an income methodology based on management’s estimates of forecasted cash flows for each reporting unit, with those cash flows discounted to present value using rates commensurate with the risks associated with those cash flows. In addition, management uses a market-based valuation method involving analysis of market multiples of revenues and earnings before interest, taxes, depreciation and amortization ("EBITDA") for (i) a group of comparable public companies and (ii) recent transactions, if any, involving comparable companies. If the fair value of the reporting unit exceeds its carrying value, step two need not be performed.

Goodwill and intangible assets with indefinite lives are evaluated annually for impairment in the fourth quarter, based on annual forecast information. Intangible assets with finite lives are amortized using the straight-line method over their estimated period of benefit. Goodwill and other intangible assets are reviewed for possible impairment whenever changes in conditions indicate that the fair value of a reporting unit is more likely than not below its carrying value.

During the third quarter of 2018, management identified a triggering event for possible impairment at a certain asset group in its U.K. business based on a review of historical performance, the current forecast for the remainder of the year and the loss of future orders from one of its significant customers, requiring the Company to evaluate the intangible assets for impairment. The Company performed a recoverability test by comparing the undiscounted cash flows of the asset group to its carrying value, and the estimated future cash flows of the business did not exceed the carrying value of the assets. Based on these results, the Company calculated the fair value of the asset group using an income approach, which resulted in an other intangible assets impairment charge of $10.0 million, or the remaining balance of the customer lists/relationships at a certain asset group within the U.K. business. This charge has been included in the operating results of the Aerospace segment. No such charges were recorded in 2017 or 2016.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Contract Liabilities

The Company's contract liabilities consist of advance payments and billings in excess of revenue recognized and deferred revenue. Advance payments and billings in excess of revenue recognized are classified as current or noncurrent based on the timing of when recognition of revenue is expected.

Unfulfilled Performance Obligations

Unfulfilled performance obligations ("backlog") represents the transaction price of firm orders for which work has not been performed and excludes unexercised contract options and potential orders under ordering-type contracts. As of December 31, 2018, the aggregate amount of the transaction price allocated to backlog was $986.1 million. The Company expects to recognize revenue on approximately $637.9 million of this amount over the next 12 months, with the remaining amount to be recognized thereafter.

Vendor Incentives

The Company’s Distribution segment enters into agreements with certain vendors providing for inventory purchase incentives that are generally earned upon achieving specified volume-purchasing levels. The Company recognizes rebate income relative to specific rebate programs as a reduction of the cost of inventory based on a systematic and rational allocation of the cash consideration offered to each of the underlying transactions that results in progress toward earning the rebate, provided that the amounts are probable and reasonably estimable. As of December 31, 2018 and 2017, total vendor incentive receivables, included in other current assets, were approximately $17.3 million and $14.5 million, respectively.

Self-Insured Retentions

To limit exposure to losses related to group health, workers’ compensation, auto and product general liability claims, the Company obtains third-party insurance coverage. The Company has varying levels of deductibles for these claims. The total liability/deductible for group health is limited to $0.3 million per claim, workers’ compensation is limited to $0.4 million per claim and for product/general liability and auto liability the limit is $0.3 million per claim. The cost of such benefits is recognized as expense based on claims filed in each reporting period and an estimate of claims incurred but not reported (“IBNR”) during such period. The estimates for the IBNR are based upon historical trends and information provided to us by the claims administrators, and are periodically revised to reflect changes in loss trends. These amounts are included in other current liabilities on the Consolidated Balance Sheets.

Liabilities associated with these claims are estimated in part by considering historical claims experience, severity factors and other actuarial assumptions. Projections of future losses are inherently uncertain because of the random nature of insurance claim occurrences and the potential for differences between actual developments and actuarial assumptions. Such self-insurance accruals will likely include claims for which the ultimate losses will be settled over a period of years.

Research and Development

Customer funded research expenditures (which are included in cost of sales) were $1.8 million in 2018, $1.1 million in 2017 and $0.9 million in 2016. Research and development costs not specifically covered by contracts are recognized as expense as incurred and included in selling, general and administrative expenses. Such costs amounted to $9.1 million, $8.2 million and $7.7 million in 2018, 2017 and 2016, respectively.

Income Taxes

Income taxes are accounted for using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss, capital loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. The deferred income taxes were significantly impacted by the enactment of the Tax Cuts and Jobs Act of 2017 ("Tax Reform"), as further discussed in Note 14, Income Taxes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Income Taxes - continued

The Company records a benefit for uncertain tax positions in the financial statements only when it determines it is more likely than not that such a position will be sustained upon examination by taxing authorities based on the technical merits of the position. Unrecognized tax benefits represent the difference between the position taken in the tax return and the benefit reflected in the financial statements.

Share-Based Payment Arrangements

The Company records compensation expense for share-based awards based upon an assessment of the grant date fair value of the awards. The fair value of each option award is estimated on the date of grant using the Black-Scholes option valuation model. A number of assumptions are used to determine the fair value of options granted. These include expected term, dividend yield, volatility of the options and the risk free interest rate. See Note 19, Share-Based Arrangements, for further information.

Derivative Financial Instruments

The Company is exposed to certain risks relating to its ongoing business operations, including market risks relating to fluctuations in foreign currency exchange rates and interest rates. Derivative financial instruments are recognized on the Consolidated Balance Sheets as either assets or liabilities and are measured at fair value. Changes in the fair values of derivatives are recorded each period in earnings or accumulated other comprehensive income, depending on whether a derivative is effective as part of a hedged transaction. Gains and losses on derivative instruments reported in accumulated other comprehensive income are subsequently included in earnings in the periods in which earnings are affected by the hedged item. The Company does not use derivative instruments for speculative purposes. See Note 7, Derivative Financial Instruments, for further information.

Pension Accounting

The Company accounts for its defined benefit pension plan by recognizing the overfunded or underfunded status of the plan, calculated as the difference between the plan assets and the projected benefit obligation, as an asset or liability on the balance sheet, with changes in the funded status recognized in comprehensive income in the year in which they occur.

Expenses and liabilities associated with the plan are determined based upon actuarial valuations. Integral to the actuarial valuations are a variety of assumptions including expected return on plan assets and discount rate. The Company regularly reviews the assumptions, which are updated at the measurement date, December 31st. The impact of differences between actual results and the assumptions are accumulated and generally amortized over future periods, which will affect expense recognized in future periods. The service cost component of net benefit cost is recorded in cost of sales and selling, general and administrative expenses separately from the other components of net benefit cost, which are recorded to non-service pension and postretirement benefit income. See Note 15, Pension Plans, for further information.

Recent Accounting Standards

Recent Accounting Standards Adopted

In May 2017, the FASB issued Accounting Standards Update ("ASU") 2017-09, "Compensation - Stock Compensation (Topic 718) - Scope of Modification Accounting". The objective of this standard update is to address the diversity in practice and reduce the cost and complexity of applying guidance for a change to the terms or conditions of a share-based payment award. This ASU provides guidance on when an entity should apply modification accounting for stock compensation. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption was permitted. The adoption of this standard update had no impact on the Company's consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Recent Accounting Standards - continued

Recent Accounting Standards Adopted - continued

In March 2017, the FASB issued ASU 2017-07, “Compensation - Retirement Benefits (Topic 715) - Improving the Net Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost”. The objective of this standard update is to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost. This standard update requires employers to disaggregate the service cost component from the other components of net benefit cost. This ASU also provides guidance on how to present the service cost component and the other components of net benefit cost in the income statement and allows only the service cost component of net benefit cost to be eligible for capitalization. The other components of net benefit cost, which are expected to more than offset the service cost component, are required to be presented in the income statement separately from the service cost component and outside of operating profit. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. This ASU was applied retrospectively for the presentation of the service cost component and the other components of net benefit cost in the income statement and prospectively, on and after the effective date, for the capitalization of the service cost component and the other components of net benefit cost in assets. The standard update allows for a practical expedient that permits an employer to use the amounts disclosed in its pension and other postretirement benefit plan note for the prior comparative periods as the estimation basis for applying the retrospective presentation requirements. The Company applied this practical expedient for prior period presentation. The service cost component included in operating profit was approximately $4.9 million and the other components of net benefit cost presented below operating income was approximately $12.1 million of income for the year ended December 31, 2018. See Note 15, Pension Plans, for the service cost component and other components of net benefit in the current period and Note 2, Accounting Changes, for the impact to prior period results.

In February 2017, the FASB issued ASU 2017-05, "Other Income - Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20)". The objective of this standard update is to clarify the scope of asset derecognition guidance and to provide new guidance for partial sales of nonfinancial assets. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption was permitted; however, an entity was required to apply the amendments in this ASU in the same period that it applies the amendments for ASU 2014-09. The adoption of this standard update did not have a material impact on the Company's consolidated financial statements.

In November 2016, the FASB issued ASU 2016-18, "Statement of Cash Flows (Topic 230) - Restricted Cash". The objective of this standard update is to address the diversity in classification and presentation of changes in restricted cash on the statement of cash flows. Under this ASU, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption was permitted. The adoption of this standard update had no impact on the Company's consolidated financial statements.

In October 2016, the FASB issued ASU 2016-16, "Income Taxes (Topic 740) - Intra-Entity Transfers of Assets Other Than Inventory". Under this ASU, income tax consequences of an intra-entity transfer of an asset other than inventory is recognized when the transfer occurs. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Early adoption was permitted. The adoption of this standard update did not have a material impact on the Company's consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230) - Classification of Certain Cash Receipts and Cash Payments". This standard update was issued to address diversity in practice in how certain cash receipts and cash payments are presented and classified. The provisions of ASU 2016-15 are effective for interim and annual periods beginning after December 15, 2017. Early adoption was permitted. The adoption of this standard update did not have a material impact on the Company's consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Recent Accounting Standards - continued

Recent Accounting Standards Adopted - continued

In January 2016, the FASB issued ASU 2016-01, “Financial Instruments - Overall (Subtopic 825-10) - Recognition and Measurement of Financial Assets and Financial Liabilities”. The objective of this standard update is to remove inconsistent practices with regards to the accounting for financial instruments between US GAAP and International Financial Reporting Standards (“IFRS”). The standard update intends to improve the reporting model for financial instruments to provide users of financial statements with more decision-useful information. The provisions of this standard update are effective for interim and annual periods beginning after December 15, 2017. The adoption of this standard update had no impact on the consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers (Topic 606)" ("ASC 606"). The objective of this standard update is to remove inconsistent practices with regard to revenue recognition between US GAAP and IFRS. The standard intends to improve comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets. The provisions of ASU No. 2014-09 are effective for interim and annual periods beginning after December 15, 2017, with early adoption permitted for annual periods beginning after December 15, 2016. On January 1, 2018, the Company adopted ASC 606 using the modified retrospective method. As a result, the Company applied ASC 606 only to contracts that were not completed as of January 1, 2018. The adoption of ASC 606 resulted in a net reduction to opening retained earnings of approximately $9.6 million, net of tax, on January 1, 2018.

Subsequent to the issuance of ASU 2014-09, the FASB issued the following updates: ASU 2015-14, "Revenue from Contracts with Customers (Topic 606) - Deferral of the Effective Date"; ASU 2016-08, “Revenue from Contracts with Customers (Topic 606) - Principal versus Agent Considerations (Reporting Revenue Gross versus Net)”; ASU 2016-10, "Revenue from Contracts with Customers (Topic 606) - Identifying Performance Obligations and Licensing"; ASU 2016-12, "Revenue from Contracts with Customers (Topic 606) - Narrow-Scope Improvements and Practical Expedients"; and ASU 2016-20, "Technical Corrections and Improvements to Topic 606". The amendments in these updates affect the guidance contained within ASU 2014-09 and were similarly adopted on January 1, 2018. See Note 2, Accounting Changes, for further information on the impacts of these standard updates.

Recent Accounting Standards Yet to be Adopted

In November 2018, the FASB issued ASU 2018-19, "Codification Improvements to Topic 326, Financial Instruments - Credit Losses". The amendment clarifies that receivables arising from operating leases are not within the scope of Subtopic 326-20 and impairment of receivables arising from operating leases should be accounted for in accordance with Topic 842, Leases. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted. The adoption of this standard update is not expected to have a material impact on the Company's consolidated financial statements.

In October 2018, the FASB issued ASU 2018-16, "Derivatives and Hedging (Topic 815) - Inclusion of the Secured Overnight Financing Rate ("SOFR") Overnight Index Swap ("OIS") Rate as a Benchmark Interest Rate for Hedge Accounting Purposes". The Federal Reserve Board and the Federal Reserve Bank of New York initiated an effort to introduce an alternative reference rate to LIBOR in the United States. This standard update permits the use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes under Topic 815. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted. The amendments in this ASU are required to be adopted concurrently with the amendments in ASU 2017-12. The adoption of this standard update is not expected to have a material impact on the Company's consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Recent Accounting Standards - continued

Recent Accounting Standards Yet to be Adopted - continued

In August 2018, the FASB issued ASU 2018-15, "Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40) - Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract". The objective of the standard update is to provide additional guidance on the accounting for costs of implementation activities performed in a cloud computing arrangement that is a service contract to address the diversity in practice. The ASU requires an entity in a hosting arrangement that is a service arrangement to determine which costs to capitalize as an asset related to a service contract and which costs to expense, and to determine which project stage implementation activities relate to. Costs for implementation activities in the application development stage are capitalized depending on the nature of the costs, while costs incurred during the preliminary project and postimplementation stages are expensed as the activities are performed. Capitalized implementation costs of a hosting arrangement are expensed over the term of the hosting arrangement in the same line item in the statement of operations as the fees associated with the hosting element of the arrangement. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted. The adoption of this standard update is not expected to have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU 2018-14, "Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20) - Disclosure Framework - Changes to Disclosure Requirements for Defined Benefit Plans". The objective of the standard update is to improve the effectiveness of disclosure requirements for defined benefit pension and other postretirement plans. This standard update removes disclosures that are no longer considered cost beneficial, clarifies specific requirements of disclosures and adds new disclosure requirements identified as relevant. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2020. Early adoption is permitted. The adoption of this standard update is not expected to have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820) - Disclosure Framework - Changes to Disclosure Requirements for Fair Value Measurement". The objective of this standard update is to improve the effectiveness of disclosures for recurring and nonrecurring fair value measurements. This standard update removes certain disclosure requirements that are no longer considered cost beneficial, modifies existing disclosure requirements and adds new disclosure requirements identified as relevant. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted. An entity is permitted to early adopt any removed or modified disclosures upon issuance of the ASU and delay adoption of the additional disclosures until the effective date. The adoption of this standard update is not expected to have a material impact on the Company's consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02 "Income Statement - Reporting Comprehensive Income (Topic 220) - Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". The objective of this standard is to address the concern that tax effects of items within accumulated other comprehensive income do not appropriately reflect the tax rate because Tax Reform required the adjustment of deferred taxes be recorded to income. This ASU provides an entity the election to reclassify stranded tax effects resulting from Tax Reform to retained earnings from accumulated other comprehensive income. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted. The Company is currently assessing the potential impact this standard update could have on its consolidated financial statements.

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815) - Targeted Improvements to Accounting for Hedging Activities". The objective of this standard update is to improve the financial reporting of hedging relationships to better reflect the economic results of an entity's risk management activities in its financial statements. This ASU expands hedge accounting for both nonfinancial and financial risk components and refines the measurement of hedge results to better reflect an entity's hedging strategies. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted. The adoption of this standard update is not expected to have a material impact on the Company's consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Recent Accounting Standards - continued

Recent Accounting Standards Yet to be Adopted - continued

In January 2017, the FASB issued ASU 2017-04, "Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment". The objective of this standard update is to simplify the subsequent measurement of goodwill, eliminating Step 2 from the goodwill impairment test. Under this ASU, an entity should perform its annual goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity would recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, assuming the loss recognized does not exceed the total amount of goodwill for the reporting unit. The standard update is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted. The impact of the adoption of this standard update is dependent on the Company's goodwill impairment assessment.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments". The objective of this standard update is to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. The amendments in this ASU replace the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. The standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted. An entity will apply the amendments in this ASU through a cumulative-effect adjustment to retained earnings as of the first reporting period in which the guidance is effective.The adoption of this standard update is not expected to have a material impact on the Company's consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842)”. Under this ASU as amended, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date: (i) a lease liability, which is a lessee’s obligation to make lease payments arising from a lease, measured on a discounted basis; and (ii) a right-of-use asset, which is an asset that represents the lessee’s right to use, or control the use of, a specified asset for the lease term. Lessor accounting is largely unchanged under this ASU as amended. This standard update is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. Early adoption is permitted. The Company has developed a project plan that includes a three-phase approach to implementing this standard update. Phase one, the assessment phase, was completed in the third quarter of 2017. The Company began the second phase in the fourth quarter of 2017, which included implementing new lease administration software and entering the Company's lease information and financial data into the software, establishing policies discussed below and understanding the initial financial impact this standard update will have on the Company's consolidated financial statements. Phase three, which the Company began in the fourth quarter of 2018, included integrating the standard update into financial reporting processes and systems and developing a more robust understanding of the financial impact of this standard update. The Company estimates that the adoption of this ASU will result in an increase of approximately $85.0 million to $100.0 million to its assets and liabilities due to the addition of right-of-use assets and lease liabilities for operating leases on the balance sheet; however, it does not expect the ASU to have a material impact on the Company's cash flows, results of operations or debt covenant compliance.

The Company has elected the transition method allowing entities to initially apply the new leases standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company has elected not to apply the recognition requirements to short-term leases, and will recognize the lease payments in profit or loss on a straight-line basis over the lease term and variable payments in the period in which the obligation for those payments is incurred. The Company has elected the following practical expedients (which must be elected as a package and applied consistently to all leases): an entity need not reassess whether any expired or existing contracts are or contain leases, an entity need not reassess the lease classification for any expired or existing leases and an entity need not reassess initial direct costs for any existing leases. Additionally, the Company has elected the practical expedient to not separate nonlease components from the associated lease component and account for those components as a single component for certain asset classes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Recent Accounting Standards - continued

Recent Accounting Standards Yet to be Adopted - continued

Subsequent to the issuance of ASU 2016-02, the FASB has issued the following updates: ASU 2018-10, "Codification Improvements to Topic 842, Leases", ASU 2018-11, "Leases (Topic 842): Targeted Improvements - Transition - Comparative Reporting at Adoption", and ASU 2018-20, "Leases (Topic 842): Narrow-Scope Improvements for Lessors". The amendments in these updates affect the guidance contained within ASU 2016-02 and have been assessed as part of the Company's leasing project plan.

2. ACCOUNTING CHANGES

The Company's significant accounting policies are detailed in Note 1, Summary of Significant Accounting Policies.

Revenue Recognition

The cumulative effect of the changes made to the Company's Consolidated Balance Sheets as of January 1, 2018 as a result of the adoption of ASC 606 was as follows:

in thousands	Balance at December 31, 2017	Adjustments due to ASC 606	Balance at January 1, 2018
Assets			
Accounts receivable, net	$313,451	$ (29,242)	$284,209
Contract assets	—	82,699	82,699
Contract costs, current portion	—	3,022	3,022
Inventories	367,437	(73,674)	293,763
Other current assets	27,188	33	27,221
Deferred income taxes	27,603	4,170	31,773
Contract costs, noncurrent portion	—	7,852	7,852
Liabilities			
Accounts payable - trade	$127,591	$ 1,068	$128,659
Contract liabilities, current portion	—	10,705	10,705
Advances on contracts	8,527	(8,527)	—
Other current liabilities	52,812	(1,016)	51,796
Income taxes payable	1,517	1,525	3,042
Contract liabilities, noncurrent portion	—	689	689
Equity			
Retained earnings	$587,877	$ (9,584)	$578,293

The reduction to retained earnings of $9.6 million in the cumulative effect adjustment on January 1, 2018 primarily reflects the reduction of $32.5 million in costs previously capitalized in inventory, which included deferred unit costs in excess of the contract average and previously capitalized general and administrative costs, partially offset by the acceleration of net sales of $62.3 million and associated gross profit of $20.2 million for deliveries that would have occurred in 2018, but are now recognized over time as costs are incurred.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

2. ACCOUNTING CHANGES (CONTINUED)

Revenue Recognition - continued

The following tables summarize the impacts of ASC 606 on the Company's consolidated financial statements.

	December 31, 2018		
	As reported	Adjustments	Balances without adoption of ASC 606
In thousands			
Assets			
Accounts receivable, net	$301,094	$ 14,965	$316,059
Contract assets	108,861	(108,861)	—
Contract costs, current portion	5,993	(5,993)	—
Inventories	294,912	105,266	400,178
Income tax refunds receivable	1,752	4,933	6,685
Other current assets	32,782	(208)	32,574
Deferred income taxes	24,437	(4,315)	20,122
Contract costs, noncurrent portion	10,666	(10,666)	—
Liabilities			
Accounts payable - trade	$158,627	$ (935)	$157,692
Contract liabilities, current portion	28,865	(28,865)	—
Advances on contracts, current portion	—	27,149	27,149
Other current liabilities	54,836	1,913	56,749
Contract liabilities, noncurrent portion	78,562	(78,562)	—
Advances on contracts, noncurrent portion	—	78,562	78,562
Equity			
Retained earnings	$610,103	$ (4,141)	$605,962

For the year ended December 31, 2018, the Company realized changes of asset and liability accounts as described above, with no impact to the Company's cash flows from operating activities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

2. ACCOUNTING CHANGES (CONTINUED)

Revenue Recognition - continued

	For the year ended December 31, 2018		
	As reported	Adjustments	Balances without adoption of ASC 606
In thousands			
Net sales	$1,875,425	$(64,257)	$1,811,168
Cost of sales	1,325,388	(45,530)	1,279,858
Gross profit	550,037	(18,727)	531,310
Selling, general and administrative expenses	444,904	(2,281)	442,623
Other intangibles asset impairment (Note 10)	10,039	—	10,039
Restructuring costs (Note 3)	8,008	—	8,008
Loss on sale of business (Note 3)	5,722	539	6,261
Net gain on sale of assets	(1,700)	—	(1,700)
Operating income	83,064	(16,985)	66,079
Interest expense, net	20,097	—	20,097
Non-service pension and post retirement benefit income	(12,127)	—	(12,127)
Other (income) expense, net	(143)	—	(143)
Earnings before income taxes	75,237	(16,985)	58,252
Income tax expense	21,068	(3,261)	17,807
Net earnings	$54,169	$(13,724)	$40,445

For the year ended December 31, 2018, the only adjustments to comprehensive income when comparing the balances with ASC 606 and the balances without ASC 606 included the adjustments to net earnings presented above.

Pension

The following tables summarize the impacts of the adoption of ASU 2017-07 on the Company's Statements of Operations and segment operating income.

	For the year ended December 31, 2017		
	As previously reported	Adjustments	As adjusted
In thousands			
Cost of sales	$1,258,437	$ 1,881	$1,260,318
Gross profit	547,472	(1,881)	545,591
Selling, general and administrative expenses	430,892	1,175	432,067
Operating income	114,175	(3,056)	111,119
Non-service pension and post retirement benefit income	—	(3,056)	(3,056)
Segment operating income			
Distribution	$52,482	$(1,110)	$51,372
Aerospace	119,889	(2,235)	117,654
Corporate expenses	(58,452)	289	(58,163)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

2. ACCOUNTING CHANGES (CONTINUED)

Pension - continued

	For the year ended December 31, 2016		
	As previously reported	Adjustments	As adjusted
In thousands			
Cost of sales	$1,259,284	$ 1,571	$1,260,855
Gross profit	549,092	(1,571)	547,521
Selling, general and administrative expenses	442,126	1,578	443,704
Operating income	105,923	(3,149)	102,774
Non-service pension and post retirement benefit income	—	(3,149)	(3,149)
Segment operating income			
Distribution	$41,859	$ (1,046)	$40,813
Aerospace	115,005	(2,159)	112,846
Corporate expenses	(50,930)	56	(50,874)

3. RESTRUCTURING COSTS

During the third quarter of 2017, the Company initiated restructuring activities at its Aerospace segment to support the ongoing effort of improving capacity utilization and operating efficiency to better position the Company for increased profitability and growth. Such actions include workforce reductions and the consolidation of operations, beginning in the third quarter of 2017 through the planned completion of restructuring activities in 2019. The Company currently expects these actions to result in approximately $9.2 million in pre-tax restructuring and transition charges. The Company anticipates these actions will result in total cost savings of approximately $4.0 million annually beginning in 2019.

The following table summarizes the accrual balances by cost type for the restructuring actions:

	Severance	Other [1]	Total
In thousands			
Restructuring accrual balance at December 31, 2017	$ 1,172	$179	$1,351
Provision	1,893	2,858	4,751
Cash payments	(2,034)	(2,465)	(4,499)
Changes in foreign currency exchange rates	(9)	(14)	(23)
Restructuring accrual balance at December 31, 2018	$ 1,022	$558	$1,580

[1] Includes costs associated with consolidation of facilities.

The above accrual balance was included in other current liabilities on the Company's Consolidated Balance Sheets. Since the announcement of these restructuring activities, restructuring expense related to these activities as of December 31, 2018 was $8.7 million. For the year ended December 31, 2018, restructuring expense, totaling $6.0 million, was included in restructuring costs on the Company's Consolidated Statements of Operations. Included in this expense was approximately $0.8 million of cost that primarily relates to the write-off of inventory for various small order programs that the Company will no longer continue to manufacture as a result of the consolidation of operations and $0.4 million associated with the acceleration of stock compensation for management impacted by the restructuring activities. For the year ended December 31, 2017, restructuring expense, totaling $2.7 million, was included in restructuring costs on the Company's Consolidated Statements of Operations. Included in this expense was approximately $1.0 million of cost that primarily relates to the write-off of inventory for various small order programs that the Company will no longer continue to manufacture as a result of the consolidation of operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

3. RESTRUCTURING COSTS (CONTINUED)

As part of the restructuring activities discussed above, the Company sold its U.K. Tooling business and substantially all of the assets and liabilities of its Engineering Services business in the fourth quarter of 2018. These sales did not qualify for the reporting of discontinued operations within the consolidated financial statements. The Company incurred a loss of $5.7 million associated with the sale of the U.K. Tooling business, which was included in loss on the sale of business on the Company's Consolidated Statements of Operations. Of the $5.7 million loss on the sale of the U.K. Tooling business, $1.7 million relates to the foreign currency translation reclassified from accumulated other comprehensive income (loss) to net income. Additionally, at December 31, 2018, $0.2 million and $2.3 million for the present value of note receivables were included in other current assets and other assets, respectively, on the Company's Consolidated Balance Sheets, for the amounts to be collected associated with the sale of the U.K. Tooling business. The Company incurred a loss of $0.7 million associated with the sale of substantially all of the assets and liabilities of its Engineering Services business, which was included in net (gain) loss on the sale of assets on the Company's Consolidated Statements of Operations.

Other Matters

In addition to the restructuring activities above, for the year ended December 31, 2018, the Aerospace segment incurred $1.4 million in costs associated with the termination of certain distributor agreements and separation costs for certain employees not covered by restructuring activities noted above. The Distribution segment incurred $0.6 million million in separation costs for certain employees in the year ended December 31, 2018.

In 2017, the Distribution segment and Aerospace segment incurred $0.5 million and $0.4 million, respectively, of other severance expense in 2017. There was also $2.8 million in separation costs associated with two senior executives recorded in accrued salaries and wages on the Company's Consolidated Balance Sheets as of December 31, 2017. These amounts are not included in the table above.

During the third quarter of 2016, the Company offered a voluntary retirement program to certain employees of its Distribution segment. This program resulted in $0.3 million of expense, all of which was included in selling, general and administrative expenses on the Company's Consolidated Statements of Operations for the year ended December 31, 2016. In addition to the restructuring activity, the Distribution segment and Aerospace segment incurred $0.7 million and $2.5 million of severance expense in 2016, respectively.

4. ACCOUNTS RECEIVABLE, NET

Accounts receivable consist of the following:

	At December 31,	
	2018	2017
In thousands		
Trade receivables	$164,752	$152,078
U.S. Government contracts:		
Billed	38,173	26,093
Costs and accrued profit – not billed	780	862
Commercial and other government contracts:		
Billed	100,603	107,962
Costs and accrued profit – not billed	900	30,590
Less allowance for doubtful accounts	(4,114)	(4,134)
Total	$301,094	$313,451

The decrease in commercial and other government contracts cost and accrued profit - not billed was primarily attributable to the adoption of ASC 606. This decrease was partially offset by an increase in trade receivables at the Distribution segment and an increase in U.S. Government contracts - billed primarily associated with the JPF program.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

4. ACCOUNTS RECEIVABLE, NET (CONTINUED)

Accounts receivable, net includes amounts for matters such as contract changes, negotiated settlements and claims for unanticipated contract costs. These amounts are as follows:

	At December 31, 2018	2017
In thousands		
Contract changes, negotiated settlements and claims for unanticipated contract costs	$900	$900
Total	$900	$900

5. CONTRACT ASSETS, CONTRACT COSTS AND CONTRACT LIABILITIES

Contract assets consist of unbilled amounts typically resulting from sales under long-term contracts when the cost-to-cost method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer. Contract costs consist of costs to obtain and fulfill a contract. Costs to fulfill a contract primarily consist of nonrecurring engineering costs incurred at the start of a new program for which such costs are expected to be recovered under existing and future contracts. Such costs are amortized over the estimated revenue amount of the contract. Costs to obtain a contract consist of commissions and agent fees paid in connection with the award of a contract. Contract liabilities consist of advance payments and billings in excess of costs incurred and deferred revenue.

Activity related to contract assets, contract costs and contract liabilities is as follows:

	December 31, 2018	January 1, 2018[1]	$ Change	% Change
In thousands				
Contract assets[2]	$ 108,861	$82,699	$26,162	31.6 %
Contract costs, current portion	$ 5,993	$3,022	$2,971	98.3 %
Contract costs, noncurrent portion	$ 10,666	$7,852	$2,814	35.8 %
Contract liabilities, current portion	$ 28,865	$10,705	$18,160	169.6 %
Contract liabilities, noncurrent portion	$ 78,562	$689	$77,873	11,302.3%

[1] These amounts include the impact of the cumulative effect adjustment resulting from the adoption of ASC 606.
[2] The Company's contract assets were net of unliquidated progress payments, primarily from the U.S. Government, of $30.3 million and $10.5 million at December 31, 2018 and January 1, 2018, respectively.

Contract Assets

The increase in contract assets was primarily due to the recognition of revenue related to the satisfaction or partial satisfaction of performance obligations during the year ended December 31, 2018. This increase is primarily related to work performed and not yet billed on the JPF program with the USG, legacy fuze programs, the SH-2G program with Peru, the Sikorsky BLACK HAWK helicopter program and the Bell Helicopter composite blade program in the Aerospace segment and the automation, control and energy product line at the Distribution segment. These increases were partially offset by amounts billed under the AH-1Z program and Sikorsky Combat Rescue helicopter program. There were no significant impairment losses related to the Company's contract assets during the year ended

December 31, 2018.

Contract assets includes amounts for matters such as contract changes, negotiated settlements and claims for unanticipated contract costs. These amounts are as follows:

In thousands	December 31, 2018	December 31, 2017
Contract changes, negotiated settlements and claims for unanticipated contract costs	$ 2,909	$ —

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

5. CONTRACT ASSETS, CONTRACT COSTS AND CONTRACT LIABILITIES (CONTINUED)

Contract Assets - continued

On January 1, 2018, $4.3 million in claims previously included in inventory were reclassified to contract assets as part of the cumulative effect adjustment resulting from the adoption of ASC 606. This amount was partially offset by the settlement of claims in the year ended December 31, 2018.

Contract Costs

At December 31, 2018, costs to fulfill a contract and costs to obtain a contract were $8.9 million and $7.8 million, respectively. These amounts are included in contract costs, current portion and contract costs, noncurrent portion on the Company's Consolidated Balance Sheets at December 31, 2018.

The increase in contract costs, current portion was primarily related to costs to obtain a JPF DCS contract and costs to fulfill certain metallic structures programs, partially offset by amortization of contract costs. For the year ended December 31, 2018, amortization of contract costs was $3.7 million.

The increase in contract costs, noncurrent portion was primarily related to costs to obtain a JPF DCS contract, partially offset by the reclassification of certain costs to fulfill certain metallic structures programs to contract costs, current portion.

Contract Liabilities

The increase in contract liabilities, current portion was primarily due to advance payments received for a JPF DCS contract and the K-MAX® program, partially offset by revenue recognized associated with deliveries under the K-MAX® program. For the year ended December 31, 2018, revenue recognized related to contract liabilities, current portion was $12.1 million.

The increase in contract liabilities, noncurrent portion was due to advance payments received for a JPF DCS contract. For the year ended December 31, 2018, the Company did not recognize revenue against contract liabilities, noncurrent portion.

6. FAIR VALUE MEASUREMENTS

Fair value is defined as the exchange price that would be received for an asset or the price paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date.

The Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires us to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs other than quoted prices included in Level 1, such as quoted prices for markets that are not active or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar

techniques that use significant unobservable inputs.

The following table provides the carrying value and fair value of financial instruments that are not carried at fair value at December 31, 2018 and 2017:

	2018		2017	
	Carrying Value	Fair Value	Carrying Value	Fair Value
In thousands				
Debt[1]	$299,124	$325,251	$405,602	$428,432

[1] These amounts are classified within Level 2.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

6. FAIR VALUE MEASUREMENTS (CONTINUED)

The above fair values were computed based on quoted market prices and discounted future cash flows (observable inputs), as applicable. Differences from carrying values are attributable to interest rate changes subsequent to when the transactions occurred. The fair values of cash and cash equivalents, accounts receivable, net, and accounts payable - trade approximate their carrying amounts due to the short-term maturities of these instruments.

Recurring Fair Value Measurements

The Company holds derivative instruments for foreign exchange contracts that are measured at fair value using observable market inputs such as forward rates and our counterparties' credit risks. Based on these inputs, the derivative instruments are classified within Level 2 of the valuation hierarchy and have been included in other current liabilities on the Consolidated Balance Sheet at December 31, 2018 and other current assets and other assets on the Consolidated Balance Sheet at December 31, 2017. Based on the continued ability to trade and enter into forward contracts and interest rate swaps, the Company considers the markets for the fair value instruments to be active.

The Company evaluated the credit risk associated with the counterparties to these derivative instruments and determined that as of December 31, 2018, such credit risks have not had an adverse impact on the fair value of these instruments.

Nonrecurring Fair Value Measurements

During the third quarter of 2018, the Company incurred a $10.0 million impairment charge for a certain asset group at its U.K. business. Refer to Note 10, Goodwill and Other Intangible Assets, Net for further information regarding the calculation of fair value.

7. DERIVATIVE FINANCIAL INSTRUMENTS

The Company is exposed to certain risks relating to its ongoing business operations, including market risks relating to fluctuations in foreign currency exchange rates and interest rates. Derivative financial instruments are reported on the Consolidated Balance Sheets at fair value. Changes in the fair values of derivatives are reported each period in earnings or accumulated other comprehensive income, depending on whether a derivative is effective as part of a hedged transaction. Gains and losses on derivative instruments reported in accumulated other comprehensive income are subsequently included in earnings in the periods in which earnings are affected by the hedged item. The Company does not use derivative instruments for speculative purposes.

The Company held forward exchange contracts designed to hedge forecasted transactions denominated in foreign currencies and to minimize the impact of foreign currency fluctuations on the Company's earnings and cash flows. Some of those contracts were designated as cash flow hedges. The Company will include in earnings amounts currently included in accumulated other comprehensive income upon recognition of cost of sales related to the underlying transaction.

Interest Rate Swaps

The Company's Term Loan Facility ("Term Loan") contains floating rate obligations and is subject to interest rate fluctuations. During 2015, the Company entered into interest rate swap agreements for the purposes of hedging the eight quarterly variable-rate Term Loan interest payments due in 2016 and 2017. Additionally, the Company entered into interest rate swap agreements to effectively convert $83.8 million of our variable rate revolving credit facility debt to a fixed interest rate. These interest rate swap agreements were designated as cash flow hedges and intended to manage interest rate risk associated with our variable-rate borrowings and minimize the impact on our earnings and cash flows of interest rate fluctuations attributable to changes in LIBOR rates. These agreements were not material to the Company's Consolidated Balance Sheets for the years ended December 31, 2018 and 2017. As of December 31, 2017, these interest rate swap agreements had all matured and were no longer outstanding. As such, there was no activity related to these contracts for the year ended December 31, 2018. The activity related to these contracts was not material to the Company's Consolidated Financial Statements for the year ended December 31, 2017. The Company reclassified $0.9 million of expense from other comprehensive income for the year ended December 31, 2016. No amounts related to cash flow hedges are expected to be reclassified from other comprehensive income over the next twelve months.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

7. DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Forward Exchange Contracts

From time to time, the Company will enter into foreign exchange contracts that are not designated as hedging instruments. These contracts are entered into in order to minimize the impact of foreign currency fluctuations on the Company's earnings and cash flows. The Company reports expense related to these contracts in other (income) expense, net on the Consolidated Statements of Operations.

In addition to the forward exchange contract mentioned above, the Company held forward exchange contracts to mitigate the risk associated with foreign currencies that were not designated as hedging instruments as of December 31, 2018 and 2017. The balances associated with the contracts and the gains or losses reported in other (income) expense, net were not material for the years ended December 31, 2018, 2017 or 2016.

8. INVENTORIES

Inventories consist of the following:

	At December 31,	
	2018	2017
In thousands		
Merchandise for resale	$162,985	$151,520
Raw materials	15,939	18,871
Contracts in process:		
U.S. Government, net of progress payments of $0 and $10,810 in 2018 and 2017, respectively[1]	6,030	75,448
Commercial and other government contracts	49,471	55,510
Other work in process (including certain general stock materials)	41,524	40,445
Finished goods	18,963	25,643
Total	$294,912	$367,437

[1] As a result of the adoption of ASC 606, progress payments were included in contract assets for the year ended December 31, 2018.

The decrease in contracts in process U.S. government was primarily attributable to the adoption of ASC 606.

Previously contractually recoverable general and administrative costs were adjusted within the cumulative effect to retained earnings and are no longer amortized into earnings after January 1, 2018. General and administrative costs charged to inventory by Aerospace segment operations during 2017 were $14.7 million. The estimated amount of general and administrative costs remaining in contracts in process at December 31, 2017 was $10.6 million. This estimate was based on the ratio of such costs to total costs of production.

The Company had inventory of $5.1 million and $5.2 million as of December 31, 2018 and 2017, respectively, on consignment at customer locations, the majority of which is held by Distribution segment customers.

Inventories include amounts associated with matters such as contract changes, negotiated settlements and claims for unanticipated contract costs, which totaled $0.5 million and $4.4 million at December 31, 2018 and 2017, respectively. As a result of ASC 606, $4.3 million of claims in inventory at December 31, 2017 were reclassified to contract assets as part of the cumulative effect adjustment on January 1, 2018.

At December 31, 2018 and 2017, $34.7 million and $25.5 million, respectively, of K-MAX® inventory, including inventory associated with the new build aircraft, was included in contracts and other work in process inventory and finished goods on the Company's Consolidated Balance Sheets. Management believes that approximately $18.1 million of the K-MAX® inventory will be sold after December 31, 2019, based upon the anticipation of additional aircraft manufacturing and supporting the fleet for the foreseeable future.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

8. INVENTORIES (CONTINUED)

At December 31, 2018 and 2017, $5.4 million and $6.2 million, respectively, of SH-2G(I) inventory was included on the Company's balance sheet in contracts and other work in process inventory. Management believes that approximately $5.0 million of the SH-2G(I) inventory will be sold after December 31, 2019. This balance represents spares requirements and inventory to be used in SH-2G programs.

9. PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment, net is summarized as follows:

	At December 31,	
	2018	2017
In thousands		
Land	$15,292	$15,163
Buildings	104,596	104,763
Leasehold improvements	21,948	20,746
Machinery, office furniture and equipment	287,269	269,417
Construction in process	17,425	27,974
Total	446,530	438,063
Less accumulated depreciation	(262,306)	(252,611)
Property, plant and equipment, net	$184,224	$185,452

Depreciation expense was $28.6 million, $27.7 million and $27.5 million for 2018, 2017 and 2016, respectively.

The Company is currently implementing new enterprise resource planning ("ERP") systems at both its Aerospace segment and its Distribution segment. For the years ended December 31, 2018, 2017 and 2016, expenses incurred totaled approximately $1.2 million, $1.2 million and $2.0 million, respectively, and capital expenditures totaled $4.1 million, $3.6 million, and $4.1 million, respectively. Total to date ERP system capital expenditures as of December 31, 2018, were $52.3 million. Depreciation expense for the ERP systems for the years ended December 31, 2018, 2017 and 2016, totaled $3.7 million, $3.3 million and $3.9 million, respectively.

Capital Leases

For the year ended December 31, 2018, $11.4 million of assets included in machinery, office furniture and equipment and construction in process were accounted for as capital leases, with the majority of these assets being purchased under the Company's master leasing agreement with PNC Equipment Finance ("PNC"). At December 31, 2018, the Company had accumulated depreciation of $1.5 million associated with these assets. For the year ended December 31, 2017, $7.2 million of assets purchased under the Company's master leasing agreement with PNC and accounted for as capital leases was included in machinery, office furniture and equipment with accumulated depreciation of $0.8 million. Depreciation expense associated with the capital leases was $0.7 million, $0.4 million and $0.3 million for 2018, 2017 and 2016, respectively. See Note 17, Commitments and Contingencies, for a discussion on the master leasing agreement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

10. GOODWILL AND OTHER INTANGIBLE ASSETS, NET

Goodwill

The following table sets forth the change in the carrying amount of goodwill for each reportable segment and for the Company:

	2018			2017		
	Distribution	Aerospace	Total	Distribution	Aerospace	Total
In thousands						
Gross balance at beginning of period	$149,204	$218,765	$367,969	$149,204	$204,942	$354,146
Accumulated impairment	—	(16,252)	(16,252)	—	(16,252)	(16,252)
Net balance at beginning of period	149,204	202,513	351,717	149,204	188,690	337,894
Change in goodwill due to disposals[(1)]	—	(447)	(447)	—	—	—
Foreign currency translation	—	(5,905)	(5,905)	—	13,823	13,823
Net balance at end of period	$149,204	$196,161	$345,365	$149,204	$202,513	$351,717
Accumulated impairment at end of period	$—	$(16,252)	$(16,252)	$—	$(16,252)	$(16,252)

[(1)]The Company sold its U.K. Tooling business and substantially all of the assets and liabilities of its Engineering Services business in the fourth quarter of 2018. This amount reflects the proportionate goodwill based on these businesses' relative fair value of the Aerosystems reporting unit.

2018 Analysis

In accordance with ASC 350, the Company evaluates goodwill for possible impairment on at least an annual basis. Upon completion of the 2018 qualitative assessment of events and circumstances affecting recorded goodwill as described in Note 1, Summary of Significant Accounting Policies, the Company concluded that the Aerosystems and Distribution reporting units should receive a Step 1 analysis, while qualitative assessments should be performed for the Specialty Bearings and Engineered Products and KPP - Orlando reporting units.

The qualitative assessment performed for Specialty Bearings and Engineered Products and KPP - Orlando took into consideration the following factors: general economic conditions, industry specific performance, changes in carrying values of the reporting unit, the assessment of assumptions used in the previous fair value calculation and changes in transaction multiples. The results of these analyses indicated that it is more likely than not that goodwill is not impaired and these reporting units did not need to proceed to the two-step impairment test.

A Step 1 analysis was performed for the Distribution and Aerosystems reporting units. The results of the Step 1 analyses indicated that the Company did not need to proceed to Step 2, as the fair values of the reporting units exceeded the respective carrying values. The Company performed a sensitivity analysis relative to the discount rate and growth rate selected and determined a decrease of one percentage point in the terminal growth rate or an increase of one percentage point in the discount rate would not result in a fair value calculation less than the carrying value for both reporting units.

2017 Analysis

Upon completion of the 2017 qualitative assessment of events and circumstances affecting recorded goodwill as described in Note 1, Summary of Significant Accounting Policies, the Company concluded that the Aerosystems and Distribution reporting units should receive a Step 1 analysis, while qualitative assessments should be performed for the Specialty Bearings and Engineered Products and KPP - Orlando reporting units.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

10. GOODWILL AND OTHER INTANGIBLE ASSETS, NET (CONTINUED)

Goodwill - continued

2017 Analysis - continued

The qualitative assessment performed for Specialty Bearings and Engineered Products and KPP - Orlando took into consideration the following factors: general economic conditions, industry specific performance, changes in carrying values of the reporting unit, the assessment of assumptions used in the previous fair value calculation and changes in transaction multiples. The results of these analyses indicated that these reporting units did not need to proceed to the two-step impairment test.

A Step 1 analysis was performed for the Distribution and Aerosystems reporting units. The results of the Step 1 analyses indicated that the Company did not need to proceed to Step 2, as the as the fair values of the reporting units exceeded the respective carrying values. The increase in fair value for these reporting units, as compared to 2016, was partially driven by a benefit to future cash flows as a result of the enactment of Tax Reform during the fourth quarter of 2017. The Company performed a sensitivity analysis relative to the discount rate and growth rate selected and determined a decrease of one percentage point in the terminal growth rate or an increase of one percentage point in the discount rate would not result in a fair value calculation less than the carrying value for both reporting units.

Other Intangible Assets

Other intangible assets consisted of:

		At December 31, 2018		At December 31, 2017	
	Amortization Period	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
In thousands					
Customer lists / relationships	6-26 years	$132,661	$ (61,968)	$159,592	$ (65,036)
Developed technologies	10-20 years	19,729	(3,998)	20,148	(2,790)
Trademarks / trade names	3-15 years	8,747	(4,322)	8,995	(3,905)
Non-compete agreements and other	1-9 years	7,607	(7,527)	8,345	(8,319)
Patents	17 years	523	(445)	523	(435)
Total		$169,267	$ (78,260)	$197,603	$ (80,485)

The decrease in the other intangible assets, net balance at December 31, 2018, as compared to December 31, 2017, was primarily due to the write-off of $10.0 million for a certain asset group at the U.K. business discussed below and amortization. Intangible asset amortization expense was $13.5 million, $14.6 million and $15.6 million in 2018, 2017 and 2016, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

10. GOODWILL AND OTHER INTANGIBLE ASSETS, NET (CONTINUED)

Other Intangible Assets - continued

2018 Analysis

In accordance with ASC 360 - Property, Plant, and Equipment ("ASC 360"), the Company is required to evaluate long-lived assets for possible impairment whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. During the third quarter of 2018, management identified a triggering event for possible impairment at a certain asset group in its U.K. business based on a review of its historical performance, the current forecast for the remainder of the year and the loss of future orders from one of its significant customers, requiring the Company to evaluate the intangible assets for impairment. The Company performed a recoverability test as defined under ASC 360 by comparing the undiscounted cash flows of the asset group to its carrying value. The estimated undiscounted cash flows of the business did not exceed the carrying value of the assets. Based on these results, the Company calculated the fair value of the asset group, using an income approach based on the estimated future cash flows, discounted to present value using a rate commensurate with the risks associated with the asset group's weighted average cost of capital. This calculation resulted in a write-off of $10.0 million for a certain asset group at the U.K. business, which was included in other intangible assets impairment on the Company's Consolidated Statements of Operations. This charge has been included in the operating results of the Company's Aerospace segment. Other intangible assets, gross, and accumulated amortization decreased by $21.0 million and $11.0 million, respectively, as a result of the $10.0 million impairment of customer lists/relationships at the asset group within the Company's U.K. business incurred in the year ended December 31, 2018.

2017 Analysis

As a result of operating losses at a certain asset group in the U.K. business and the Engineering Services asset group, the Company identified a triggering event during the fourth quarter of 2017. The Company evaluated certain long-lived assets associated with these asset groups, for which the primary assets within the asset groups were intangible assets. The total amount of intangible assets at the U.K. and Engineering Services businesses at December 31, 2017 was $11.3 million and $1.2 million, respectively. The Company compared the carrying amount of these long-lived assets to the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the assets. The carrying value did not exceed the fair value, indicating there was no impairment of long-lived assets held by the U.K. and Engineering Services businesses.

Estimated amortization expense for the next five years associated with intangible assets existing as of December 31, 2018, is as follows:

In thousands	
2019	$11,363
2020	$10,828
2021	$10,664
2022	$9,321
2023	$8,581

In order to determine the useful life of acquired intangible assets, the Company considers numerous factors, most importantly the industry considerations associated with the acquired entities. The Company determines the amortization period for acquired intangible assets, such as customer relationships, based primarily on an analysis of their historical customer sales attrition information and the period over which the assets are expected to deliver meaningful cash flow generation in support of the fair value of the asset.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

11. ENVIRONMENTAL COSTS

The following table displays the activity and balances associated with accruals related to environmental costs included in other current liabilities and other long-term liabilities:

	2018	2017
In thousands		
Balance at January 1	$6,057	$6,635
Additions to accrual	—	442
Payments	(944)	(1,062)
Changes in foreign currency exchange rates	418	42
Balance at December 31	$5,531	$6,057

Bloomfield

In August 2008, the Company completed its purchase of the portion of the Bloomfield campus that Kaman Aerospace Corporation had leased from NAVAIR for many years. In connection with the purchase, the Company has assumed responsibility for environmental remediation at the facility as may be required under the Connecticut Transfer Act (the "Transfer Act") and it continues the effort to define the scope of the remediation that will be required by the Connecticut Department of Environmental Protection ("CTDEP"). The transaction was recorded by taking the undiscounted estimated remediation liability of $20.8 million and discounting it at a rate of 8% to its present value. The fair value of the Navy Property asset, which at that time approximated the discounted present value of the assumed environmental liability of $10.3 million, is included in property, plant and equipment, net. This remediation process will take many years to complete.

The following represents estimated future payments for the undiscounted environmental remediation liability related to the Bloomfield campus as of December 31, 2018:

In thousands	
2019	$422
2020	160
2021	480
2022	142
2023	283
Thereafter	3,951
Total	$5,438

Other

In 2014, the Company sold its former manufacturing facility in Moosup, Connecticut to TD Development, LLC ("TD"). In connection with the sale, the Company agreed to contribute $4.0 million in cash to an escrow account over a four-year period to fund a portion of TD's environmental remediation work performed on the site. The Company funded $1.6 million to the escrow account between 2014 and 2015. TD stopped work on the site in 2016 and defaulted on its obligations under the sale agreements. From 2016 to 2018, the Company funded $2.4 million to a separate environmental escrow account due to TD's work stoppage.

In December 2016, the Company filed a summons and civil complaint against TD, which was subsequently amended in April 2017. The amended complaint alleged breach of contract, default by TD and unjust enrichment, and sought damages and other equitable relief against TD, including the return to the Company of all amounts held in the environmental escrow accounts. On December 21, 2018, the court entered an order and judgment favorable to the

Company, which granted its application to confirm an arbitration award. The judgment provides that TD is not entitled to any of the amounts held in the escrow accounts nor any accrued interest, and the funds held in the escrow accounts shall be released to the Company. Additionally, the court awarded the Company compensatory damages, including reasonable legal fees, costs and expenses, and interest on the amounts awarded, but unpaid.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

11. ENVIRONMENTAL COSTS (CONTINUED)

Other - continued

As of December 31, 2018, the Company has not recorded any amounts for compensatory damages, reasonable legal fees and costs and expenses from the arbitration award. The accrual related to this matter remained at $2.4 million as of December 31, 2018, unchanged from the prior year.

The Company's environmental accrual also includes estimated environmental remediation costs that the Company expects to incur at the former Music segment’s New Hartford, CT facility and the Aerospace segment’s facility in Rimpar, Germany. The Company continues to assess the work that may be required at each of these facilities, which may result in a change to this accrual. For further discussion of these matters, see Note 17, Commitments and Contingencies.

12. DEBT

Long-Term Debt

The Company has long-term debt as follows:

	At December 31,	
	2018	2017
In thousands		
Revolving credit agreement	$38,500	$140,074
Term loan	76,875	84,375
Convertible notes	183,749	181,153
Total	299,124	405,602
Less current portion	9,375	7,500
Total excluding current portion	$289,749	$398,102

At December 31, 2018 and 2017, the current and long-term debt balances on the Company's Consolidated Balance Sheets were net of debt issuance costs of $5.5 million and $6.5 million, respectively.

The weighted average interest rate on long-term borrowings outstanding as of December 31, 2018 and 2017, was 3.44% and 3.02%, respectively.

For the years ended December 31, 2018 and 2017, $6.6 million and $5.0 million, respectively, of liabilities associated with our capital leases are included in other long-term liabilities. See Note 17, Commitments and Contingencies, for a discussion of the master leasing agreement.

The aggregate annual maturities of long-term debt for each of the next five years are approximately as follows:

In thousands	
2019	$9,375
2020	$106,000
2021	$—
2022	$—
2023	$—

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12. DEBT (CONTINUED)

Convertible Notes

Overview

During May 2017, the Company issued $200.0 million aggregate principal amount of convertible senior unsecured notes due May 2024 (the "2024 Notes") pursuant to an indenture (the "Indenture"), dated May 12, 2017, between the Company and U.S. Bank National Association, as trustee. In connection therewith, the Company entered into certain capped call transactions that cover, collectively, the number of shares of the Company's common stock underlying the 2024 Notes. In a separate transaction, the Company repurchased $103.5 million aggregate principal amount of its existing convertible senior unsecured notes due November 15, 2017 (the "2017 Notes"). In connection with the repurchase and conversion transactions of the 2017 Notes, the Company settled the associated outstanding bond hedge transactions and a portion of the associated warrant transactions it entered into in 2010 in connection with their issuance.

The remaining portion of the 2017 Notes were convertible at the option of the noteholders until the close of business on the second Scheduled Trading Day (as defined in the 2017 Notes indenture) immediately preceding the maturity date. On November 10, 2017 and November 13, 2017, the Company received conversion notices from bondholders, totaling the remaining $11.5 million principal amount outstanding under the 2017 Notes. The Company also settled the remaining portion of the bond hedge. During the first half of 2018, the remaining warrant transactions were settled with 114,778 shares of the Company's common stock.

2024 Notes

On May 12, 2017, the Company issued $175.0 million in principal amount of 2024 Notes, in a private placement offering. On May 24, 2017, the Company issued an additional $25.0 million in principal amount of 2024 Notes pursuant to the initial purchasers' exercise of their overallotment option, resulting in the issuance of an aggregate $200.0 million principal amount of 2024 Notes. The 2024 Notes bear 3.25% interest per annum on the principal amount, payable semiannually in arrears on May 1 and November 1 of each year, beginning on November 1, 2017. The 2024 Notes will mature on May 1, 2024, unless earlier repurchased by the Company or converted. The Company will settle any conversions of the 2024 Notes in cash, shares of the Company's common stock or a combination of cash and shares of common stock, at the Company's election.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

12. DEBT (CONTINUED)

Convertible Notes - continued

2024 Notes - continued

The following table illustrates the conversion rate at the date of issuance of the 2024 Notes:

	2024 Notes
Conversion Rate per $1,000 principal amount (1)	15.3227
Conversion Price (2)	$65.2626
Contingent Conversion Price (3)	$84.84
Aggregate shares to be issued upon conversion (4)	3,064,540

(1) Represents the number of shares of Common Stock hypothetically issuable per each $1,000 principal amount of 2024 Notes, subject to adjustments upon the occurrence of certain specified events in accordance with the terms of the Indenture.
(2) Represents $1,000 divided by the conversion rate as of such date. The conversion price reflects the strike price of the embedded option within the 2024 Notes. If the Company's share price exceeds the conversion price at conversion, the noteholders would be entitled to receive additional consideration either in cash, shares or a combination thereof, the form of which is at the sole discretion of the Company.
(3) Prior to November 1, 2023, the notes are convertible only in the following circumstances: (1) during any fiscal quarter commencing after July 1, 2017, and only during any such fiscal quarter, if the last reported sale price of the Company's common stock was greater than or equal to 130% of the applicable conversion price for at least 20 trading days (whether or not consecutive) during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding fiscal quarter, (2) during the five consecutive business day period following any ten consecutive trading day period (the "measurement period") in which the trading price per $1,000 principal amount of 2024 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day or (3) upon the occurrence of specified corporate events. On or after November 1, 2023, until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their notes at any time, regardless of the foregoing circumstances. If the Company undergoes a fundamental change (as defined in the Indenture), holders of the notes may require the Company to repurchase all or a portion of their notes for cash at a repurchase price equal to 100% of the principal amount to be repurchased, plus any accrued and unpaid interest. As of December 31, 2018, none of the conditions permitting the holders of the 2024 Notes to convert had been met. Therefore, the 2024 Notes are classified as long-term debt.
(4) This represents the number of shares hypothetically issuable upon conversion of 100% of the outstanding aggregate principal amount of the 2024 Notes at each date; however, the terms of the 2024 Notes state that the Company may pay or deliver, as the case may be, cash, shares of the Company's common stock or a combination of cash and shares of common stock, at the Company's election. The Company currently intends to settle the aggregate principal amount in cash. Amounts due in excess of the principal, if any, also may be settled in cash, shares of the Company's common stock or a combination of cash and shares of common stock, at the Company's election.

In connection with the 2024 Notes offering, the Company entered into capped call transactions with certain of the initial purchasers or their respective affiliates. These transactions are intended to reduce the potential dilution to the Company's shareholders and/or offset the cash payments the Company is required to make in excess of the principal amount upon any future conversion of the notes in the event that the market price per share of the Company's common stock is greater than the strike price of the capped call transactions, with such reduction and/or offset subject to a cap based on the cap price of the capped call transactions. Under the terms of the capped call transactions, the strike price ($65.2626) and the cap price ($88.7570) are each subject to adjustment in certain circumstances. In connection with establishing their initial hedges of the capped call transactions, the option counterparties or their respective affiliates entered into various derivative transactions with respect to the Company's common stock concurrently with or shortly after the pricing of the notes. The capped call transactions, which cost an aggregate $20.5 million, were recorded as a reduction of additional paid-in capital.

Accounting Standards Codification ("ASC") Topic 815 - Derivatives and Hedging ("ASC 815") provides that contracts are initially classified as equity if (1) the contract requires physical settlement or net-share settlement, or (2) the contract gives the company a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The settlement terms of our capped call transactions require net-share settlement. Based on the guidance in ASC 815, the capped call transactions were recorded as a reduction of equity as of the trade date. ASC 815 states that a reporting entity shall not consider contracts to be derivative instruments if the contract issued or held by the reporting entity is both indexed to its own stock and classified in shareholders' equity in its balance sheet. The Company concluded the capped call transactions should be accounted for in shareholders' equity and are, therefore, not to be considered a derivative instrument.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

12. DEBT (CONTINUED)

Convertible Notes - continued

2024 Notes - continued

ASC 470-20 "Debt with Conversion and Other Options" (“ASC 470-20”) clarifies the accounting for convertible debt instruments that may be settled in cash upon conversion, including partial cash settlement. ASC 470-20 specifies that an issuer of such instruments should separately account for the liability and equity components of the instruments in a manner that reflects the issuer's non-convertible debt borrowing rate which interest costs are to be recognized in subsequent periods. The note payable principal balance for the 2024 Notes at the date of issuance of $200.0 million was bifurcated into the debt component of $179.5 million and the equity component of $20.5 million. The difference between the note payable principal balance and the fair value of the debt component representing the debt discount is being accreted to interest expense over the term of the 2024 Notes. The fair value of the debt component was recognized using a 5.0% discount rate, representing the Company's borrowing rate at the date of issuance for a similar debt instrument without a conversion feature with an expected life of seven years.

The Company incurred $7.4 million of debt issuance costs in connection with the sale of the 2024 Notes, which was allocated between the debt and equity components of the instrument. Of the total amount, $0.7 million was recorded as an offset to additional paid-in capital. The balance, $6.7 million, was recorded as a contra-debt balance and is being amortized over the term of the 2024 Notes. Total amortization expense for the years ended December 31, 2018 and 2017 was $0.8 million and $0.5 million.

The carrying amount of the equity component and the principal amount of the liability component, the unamortized discount and the net carrying value of the liability are as follows:

	2024 Notes	
	December 31, 2018	December 31, 2017
In thousands		
Principal amount of liability	$200,000	$ 200,000
Unamortized discount	16,251	18,847
Carrying value of liability	$183,749	$ 181,153
Equity component	$20,459	$ 20,459

Because the embedded conversion option is indexed to the Company’s own stock and would be classified in shareholders’ equity, it does not meet the criterion under ASC 815 that would require separate accounting as a derivative instrument.

As of December 31, 2018, the "if converted value" did not exceed the principal amount of the 2024 Notes since the closing sales price of the Company's common stock was less than the conversion price of the 2024 Notes.

Interest expense associated with the 2024 Notes consisted of the following:

	For the year ended December 31,		
	2018	2017	2016
In thousands			
Contractual coupon rate of interest	$6,500	$4,207	$ —

Accretion of convertible notes discount	2,596	1,612	—
Interest expense - convertible notes	$9,096	$5,819	$ —

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

12. DEBT (CONTINUED)

Convertible Notes - continued

2017 Notes

In November 2010, the Company issued convertible senior unsecured notes due on November 15, 2017, in the aggregate principal amount of $115.0 million in a private placement offering. These notes bore 3.25% interest per annum on the principal amount, payable semiannually in arrears on May 15 and November 15 of each year, beginning in 2011. In May 2017, the Company used a portion of the net proceeds from the issuance of the 2024 Notes, along with cash received from the counterparties in connection with the termination of the existing convertible note hedge transactions referred to below, to repurchase $103.5 million principal amount of the 2017 Notes from a limited number of holders in an arm's length transaction. This repurchase represented approximately 90% of the aggregate principal amount of 2017 Notes. The repurchases were accounted for as an extinguishment of the outstanding instrument. Of the total aggregate cost of $165.3 million, $60.0 million was allocated to the equity component of the 2017 Notes and was recorded as a reduction to additional paid-in capital. The remainder of the cost was attributed to the outstanding principal repurchased and accrued interest.

The repayment of a portion of the 2017 Notes was not contingent upon the issuance of the 2024 Notes. As such, the repurchase of the 2017 Notes was accounted for as a debt extinguishment. At December 31, 2018 and 2017, there was no liability balance associated with the 2017 Notes as a result of the debt extinguishment.

See below for further details on the loss on extinguishment:

In thousands	
Carrying value of 2017 Notes	$113,943
Carrying value of Redeemed Debt	$102,548
Fair value of consideration transferred allocated to debt component[1]	103,637
Loss on extinguishment of 2017 Notes[2]	$(1,089)
Acceleration of the related portion of debt issuance cost[3]	(297)
Total loss on extinguishment of 2017 Notes[4]	$(1,386)

[1] The fair value of consideration transferred was calculated using a discount rate of 3%, representing the Company's borrowing rate at the date of issuance for a similar debt instrument with a remaining expected life of six months (for the 2017 Notes).
[2] The majority of this balance relates to the write-off of approximately $1.0 million, 90% of the unamortized debt discount.
[3] The Company determined that in connection with the repurchase of the 2017 Notes, 90% of the unamortized debt issuance costs should be written off, representing the approximate outstanding portion of these costs related to the notes repurchased.
[4] This loss is included in interest expense, net on the Company's Consolidated Statement of Operations.

In connection with the 2017 Notes, the Company had entered into convertible note hedge transactions and warrant transactions ("existing call spread transactions") with certain financial institutions. These transactions were accounted for as equity instruments at the time of issuance in 2010. With the intention of repurchasing the 2017 Notes, the Company entered into agreements with these financial institutions to terminate a portion of the existing call spread transactions concurrently with the offering. In connection with these transactions, the Company received $58.6 million in payments related to the unwind of 90% of the convertible note hedge transactions and made deliveries of 624,044 shares of the Company's common stock in connection with the partial unwind of the warrant transactions. The

Company used a portion of the proceeds from the bond hedge settlement to repurchase the 2017 Notes as described above and to make a payment to the revolving credit facility. The cash proceeds received were recorded as an increase of additional paid-in-capital which was partially offset by the delivery of shares.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

12. DEBT (CONTINUED)

Convertible Notes - continued

2017 Notes - continued

The remaining portion of the 2017 Notes were convertible at the option of the bondholders until the close of business on the second Scheduled Trading Day (as defined in the 2017 Notes indenture) immediately preceding the maturity date. On November 10, 2017 and November 13, 2017, the Company received conversion notices from bondholders, totaling the remaining $11.5 million principal amount outstanding under the 2017 Notes. The Company settled the principal amount of $11.5 million in cash, with the excess settled in shares, delivering 136,347 shares of the Company's common stock with an approximate value of $7.5 million, and any fractional shares settled in cash. Additionally, the Company received 136,369 shares to settle the remaining 10% of the convertible note hedge transactions associated with the 2017 Notes. The cash proceeds received were recorded as an increase of additional paid-in-capital which were offset by the delivery of shares. During the first half of 2018, the remaining warrant transactions were settled with 114,778 shares of the Company's common stock, which resulted in a reduction in additional paid-in-capital.

Interest expense associated with the 2017 Notes consisted of the following:

	For the year ended December 31,		
	2018	2017	2016
In thousands			
Contractual coupon rate of interest	$—	$3,270	$3,738
Accretion of convertible notes discount	—	1,797	2,144
Interest expense - convertible notes	$—	$5,067	$5,882

Revolving Credit and Term Loan Agreements

The Company has a $700.0 million Credit Agreement (the "Credit Agreement"), as amended, with JPMorgan Chase Bank N.A., as Administrative Agent, Bank of America, N.A. and Citizens Bank, N.A. as Co-Syndication Agents and SunTrust Bank, KeyBank N.A., TD Bank, N.A., BB&T and Fifth Third Bank, as Co-Documentation Agents. The Credit Agreement matures on May 6, 2020 and has revolving commitments of $600.0 million and a Term Loan commitment of $100.0 million. Capitalized terms used but not defined within this Note 12, Debt, have the meanings ascribed thereto in the Credit Agreement.

The Term Loan commitment requires quarterly payments of principal (which commenced on June 30, 2015) at the rate of $1.25 million, increasing to $1.875 million on June 30, 2017, and then to $2.5 million on June 30, 2019, with $65.0 million payable in the final quarter of the facility's term. The facility includes an accordion feature that allows the Company to increase the aggregate amount available up to $900.0 million with additional commitments from the Lenders.

The revolving credit facility permits the Company to pay cash dividends. The Lenders have been granted a security interest in substantially all of the Company’s and its domestic subsidiaries’ personal property and other assets (including intellectual property but excluding real estate), including a pledge of 66% of the Company’s equity interest in certain foreign subsidiaries and 100% of the Company’s equity interest in its domestic subsidiaries, as collateral for the Company’s obligations under the Credit Agreement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

12. DEBT (CONTINUED)

Revolving Credit and Term Loan Agreements - continued

The following table shows the amounts available for borrowing under the Company's revolving credit facility:

	At December 31,	
	2018	2017
In thousands		
Total facility	$600,000	$600,000
Amounts outstanding, excluding letters of credit	38,500	140,074
Amounts available for borrowing, excluding letters of credit	561,500	459,926
Letters of credit under the credit facility[1]	152,613	6,455
Amounts available for borrowing	$408,887	$453,471
Amounts available for borrowing subject to EBITDA, as defined by the Credit Agreement	$323,532	$246,031

[1] The Company has entered into standby letters of credit issued on the Company's behalf by financial institutions, and directly issued guarantees to third parties primarily related to advances received from customers and the guarantee of future performance on certain contracts. Letters of credit generally are available for draw down in the event the Company does not perform.

Debt issuance costs in connection with the Credit Agreement have been capitalized and are being amortized over the term of the agreement. Total amortization expense for the years ended December 31, 2018, 2017 and 2016 was $1.0 million each period.

Interest rates on amounts outstanding under the Credit Agreement are variable, and are determined based on the Consolidated Senior Secured Leverage Ratio, as defined in the Credit Agreement. In addition, the Company is required to pay a quarterly commitment fee on the unused revolving loan commitment amount at a rate ranging from 0.175% to 0.300% per annum, based on the Consolidated Senior Secured Leverage Ratio. Fees for outstanding letters of credit range from 1.25% to 2.00%, based on the Consolidated Senior Secured Leverage Ratio.

The interest rate for the outstanding amounts on both the revolving credit facility and term loan commitment are as follows:

	At December 31,	
	2018	2017
Interest rate	3.74 %	2.84 %

The financial covenants associated with the Credit Agreement include a requirement that (i) the Consolidated Senior Secured Leverage Ratio cannot be greater than 3.50 to 1.00, with an election to increase the maximum to 3.75 to 1.00 for four consecutive quarters, in connection with a Permitted Acquisition with consideration in excess of $125.0 million; (ii) the Consolidated Total Leverage Ratio, as defined in the Credit Agreement, cannot be greater than 4.00 to 1.00, with an election to increase the maximum to 4.25 to 1.00 for four consecutive quarters, in connection with a Permitted Acquisition with consideration in excess of $125.0 million; (iii) the Consolidated Interest Coverage Ratio cannot be less than 4.00 to 1.00; and (iv) Liquidity: (a) as of the last day of the fiscal quarter of the Company ending two full fiscal quarters prior to the stated maturity of the 2017 Convertible Notes, cannot be less than an amount equal to 50% of the outstanding principal amount of the 2017 Convertible Notes, and (b) as of the last day of each fiscal quarter of the Company ending thereafter, cannot be less than an amount equal to the outstanding principal amount of the 2017 Convertible Notes as of such day. The Company was in compliance with those financial covenants as of and for the quarter ended December 31, 2018, and management does not anticipate noncompliance in the foreseeable future.

Interest Payments

Cash payments for interest were $16.0 million, $17.9 million and $14.3 million in 2018, 2017 and 2016, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

13. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The components of accumulated other comprehensive income (loss) are shown below:

In thousands	2018	2017
Foreign currency translation:		
Beginning balance	$(7,056)	$(34,896)
Net (loss) gain on foreign currency translation	(9,255)	27,840
Reclassification to net income[1]	1,728	—
Other comprehensive (loss) income, net of tax	(7,527)	27,840
Ending balance	$(14,583)	$(7,056)
Pension and other post-retirement benefits [2]:		
Beginning balance	$(108,760)	$(121,448)
Reclassification to net income		
Amortization of net loss, net of tax expense of $2,818 and $5,304, respectively	8,800	8,785
Change in net (loss) gain, net of tax (benefit) expense of ($6,519) and $2,357, respectively	(20,359)	3,903
Other comprehensive (loss) gain, net of tax benefit	(11,559)	12,688
Ending balance	$(120,319)	$(108,760)
Derivative instruments [3]:		
Beginning balance	$2	$(49)
Net gain on derivative instruments, net of tax expense of $0 and $73, respectively	—	121
Reclassification to net income, net of tax expense (benefit) of $1 and ($42), respectively	2	(70)
Other comprehensive income, net of tax	2	51
Ending balance	$4	$2
Total accumulated other comprehensive income (loss)	$(134,898)	$(115,814)

[1] The foreign currency translation reclassified to net income relates to the sale of the Company's UK Tooling business (see Note 3, Restructuring Costs, for additional information).
[2] These accumulated other comprehensive income components are included in the computation of net periodic pension cost (see Note 15, Pension Plans for additional information).
[3] See Note 7, Derivative Financial Instruments, for additional information regarding the Company's derivative instruments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

14. INCOME TAXES

The components of income tax expense (benefit) are as follows:

	For the year ended December 31,		
	2018	2017	2016
In thousands			
Current:			
Federal	$6,011	$16,979	$20,405
State	2,148	1,301	2,312
Foreign	1,188	2,362	738
	9,347	20,642	23,455
Deferred:			
Federal	10,988	23,498	10,133
State	1,196	251	(1,023)
Foreign	(463)	161	(1,715)
	11,721	23,910	7,395
Total	$21,068	$44,552	$30,850

During the fourth quarter of 2017, Tax Reform was enacted by the federal government. The SEC issued Staff Accounting Bulletin 118 ("SAB 118") in December 2017, which provides guidance on accounting for the tax effects of Tax Reform. SAB 118 provides a measurement period in which to finalize the accounting under Accounting Standards Codification 740, Income Taxes ("ASC 740") as it relates to Tax Reform. This measurement period should not extend beyond one year from the Tax Reform enactment date. In accordance with SAB 118, the Company has properly reflected the income tax effects of all aspects of the legislation for which the accounting under ASC 740 was impacted. The new tax legislation provided for significant changes in corporate taxation, including a reduction in the applicable corporate tax rate from 35% to 21%, effective January 1, 2018. As a result of this rate reduction, the Company's U.S. net deferred tax assets were required to be revalued as of December 31, 2017. This resulted in a one-time charge to tax expense of $9.7 million in the fourth quarter of 2017. Other Tax Reform provisions that impacted the Company included the elimination of the deduction for manufacturing activities, changes to the deductibility of executive compensation and various international tax law changes. All conclusions under SAB 118 were finalized during the fourth quarter of 2018 with no changes to the provisional amounts.

One of the international tax law changes provided for with Tax Reform relates to the taxation of a corporation's global intangible low-taxed income ("GILTI") for tax years beginning after December 31, 2017. The Company has evaluated this provision of Tax Reform and the application of ASC 740, and has determined that GILTI had no impact on the Company for the year ended December 31, 2018. Another significant international change brought upon by Tax Reform was the foreign-derived intangible income ("FDII") provision, which is applicable for tax years beginning after December 31, 2017. FDII encourages U.S. manufacturing by allowing for what equates to a 13% U.S. tax rate on qualifying export sales. The Company benefited from this provision during the year ended December 31, 2018, and expects to continue to benefit in future years.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

14. INCOME TAXES (CONTINUED)

The tax effects of temporary differences that give rise to deferred tax assets and liabilities are presented below:

	At December 31,	
	2018	2017
In thousands		
Deferred tax assets:		
Deferred employee benefits	$43,583	$46,539
Inventories	2,210	5,528
Tax loss and credit carryforwards	20,736	20,813
Accrued liabilities and other items	11,046	7,031
Total deferred tax assets	77,575	79,911
Deferred tax liabilities:		
Property, plant and equipment	(11,584)	(10,756)
Intangibles	(39,832)	(40,258)
Other items	(216)	(4,020)
Total deferred tax liabilities	(51,632)	(55,034)
Net deferred tax assets before valuation allowance	25,943	24,877
Valuation allowance	(8,533)	(5,298)
Net deferred tax assets after valuation allowance	$17,410	$19,579

The $3.2 million change in the valuation allowance from December 31, 2017 to December 31, 2018, primarily relates to additional losses incurred by the Kaman U.K. entities, including the loss on the U.K. Tooling business, and certain nondeductible executive compensation. Valuation allowances reduced the deferred tax asset attributable to these state and foreign loss and credit carryforwards to an amount that, based upon all available information, is more likely than not to be realized. Reversal of the valuation allowance is contingent upon the recognition of future taxable income in the respective jurisdictions or changes in circumstances which cause the realization of the benefits of carryforwards to become more likely than not.

A portion of the net deferred tax assets, $1.3 million, is related to a capital loss recorded on the disposition of the Company's Distribution segment’s Mexico operations. The realization of these benefits is dependent in part on future taxable capital gains.

Pre-tax losses from foreign operations amounted to $26.7 million and $5.0 million in 2018 and 2016, respectively, while pre-tax income from foreign operations amounted to $0.7 million in 2017. Tax Reform required the Company to effectively recognize all foreign earnings in U.S. taxable income in the year ended December 31, 2017. Due to this provision and foreign losses incurred in the year ended December 31, 2018, there were no accumulated earnings in foreign subsidiaries for which U.S income taxes were required to be provided in 2018.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

14. INCOME TAXES (CONTINUED)

The provision for income taxes differs from that computed at the federal statutory corporate tax rate as follows:

	For the year ended December 31,		
	2018	2017	2016
In thousands			
Federal tax at statutory rate[a]	$15,800	$33,032	$31,396
State income taxes, net of federal benefit	2,669	917	999
Tax effect of:			
Section 199 Manufacturing deduction	—	(1,616)	(2,153)
Foreign derived intangible income benefit	(2,186)	—	—
Provision to return adjustments	(2,298)	396	253
Foreign losses for which no tax benefit has been recorded	2,685	—	—
Change in valuation allowance	3,097	941	(395)
Equity compensation benefit	(910)	(851)	(514)
Impact of tax rate changes, including Tax Reform	199	10,032	613
Other, net	2,012	1,701	651
Income tax expense	$21,068	$44,552	$30,850

[a] The federal statutory tax rate was 21% for the year ended December 31, 2018 and 35% for the years ended December 31, 2017 and 2016.

During the fourth quarter of 2016, the Company elected to early adopt ASU 2016-09, "Compensation - Stock Compensation (Topic 718) - Improvements to Employee Share-Based Payment Accounting". The objective of this standard update is to simplify several aspects of the accounting for share-based payment transactions, including, but not limited to, income tax consequences. The standard update was effective for fiscal years, and interim periods within those years, beginning after December 31, 2016. Pursuant to this standard the Company recorded tax benefits of $0.9 million, 0.8 million and $0.5 million for the years ended December 31, 2018, 2017 and 2016, respectively.

The Company records a benefit for uncertain tax positions in the financial statements only when it determines it is more likely than not that such a position will be sustained upon examination by taxing authorities. Unrecognized tax benefits represent the difference between the position taken and the benefit reflected in the financial statements. On December 31, 2018, 2017 and 2016, the total liability for unrecognized tax benefits was $3.5 million, $3.4 million and $2.8 million, respectively (including interest and penalties of $0.4 million in 2018, $0.4 million in 2017 and $0.2 million in 2016).

The change in the liability for 2018, 2017 and 2016 is explained as follows:

	2018	2017	2016
In thousands			
Balance at January 1	$3,423	$2,832	$2,996
Additions based on current year tax positions	162	381	211
Changes for tax positions of prior years	(128)	152	(96)
Settlements	—	58	(155)
Reductions due to lapses in statutes of limitation	—	—	(124)
Balance at December 31	$3,457	$3,423	$2,832

Included in unrecognized tax benefits at December 31, 2018, were items approximating $3.0 million that, if recognized, would favorably affect the Company’s effective tax rate in future periods. The Company files tax returns in numerous U.S. and foreign jurisdictions, with returns subject to examination for varying periods, but generally back to and including 2013. During 2018, 2017 and 2016, $0.1 million or less of interest and penalties was recognized each year as a component of income tax expense. It is the Company’s policy to record interest and penalties on unrecognized tax benefits as income taxes.

Cash payments for income taxes, net of refunds, were $12.4 million, $16.6 million and $24.8 million in 2018, 2017 and 2016, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

15. PENSION PLANS

The Company has a non-contributory qualified defined benefit pension plan (the "Qualified Pension Plan"). On February 23, 2010, the Company's Board of Directors approved an amendment to the Qualified Pension Plan that, among other things, closed the Qualified Pension Plan to all new hires on or after March 1, 2010, and stipulated that years of service would continue to be added for purposes of the benefit calculations only through December 31, 2015, with no further accrual of benefits for service thereafter. As a result, effective December 31, 2015, the qualified pension plan was frozen with respect to future benefit accruals. Under U.S. Government Cost Accounting Standard ("CAS") 413 the Company must determine the USG's share of any pension curtailment adjustment calculated in accordance with CAS. During the fourth quarter of 2016, the Company accrued a $0.3 million liability representing our estimate of the amount due to the USG based on our pension curtailment adjustment calculation, which was submitted to the USG for review in December 2016. The Company has maintained its accrual at $0.3 million as of December 31, 2018. There can be no assurance that the ultimate resolution of this matter will not have a material adverse effect on the Company's results of operations, financial position and cash flows.

The Company also has a Supplemental Employees' Retirement Plan ("SERP"), which is considered a non-qualified pension plan. The SERP provides certain key executives, whose compensation is in excess of the limitations imposed by federal law on the qualified defined benefit pension plan, with supplemental benefits based upon eligible earnings, years of service and age at retirement. During 2010, the Company's Board of Directors also approved an amendment to the SERP that made changes consistent with the pension plan amendment. The Board's Personnel & Compensation Committee and the Board have not approved any new participants to the SERP since February 28, 2010, and do not intend to do so at any time in the future. The measurement date for both these plans is December 31.

Obligations and Funded Status

The changes in the actuarial present value of the projected benefit obligation and fair value of plan assets are as follows:

	For the year ended December 31,			
	Qualified Pension Plan		SERP	
	2018	2017	2018	2017
In thousands				
Projected benefit obligation at beginning of year	$770,316	$728,601	$7,896	$10,059
Service cost	4,897	4,794	—	—
Interest cost	23,804	24,358	246	241
Actuarial liability (gain) loss [1]	(67,157)	47,433	(280)	652
Benefit payments	(36,485)	(34,870)	(949)	(3,056)
Projected benefit obligation at end of year	$695,375	$770,316	$6,913	$7,896
Fair value of plan assets at beginning of year	$643,392	$572,174	$—	$—
Actual return on plan assets	(46,520)	96,088	—	—
Employer contributions	30,000	10,000	949	3,056
Benefit payments	(36,485)	(34,870)	(949)	(3,056)
Fair value of plan assets at end of year	$590,387	$643,392	$—	$—
Funded status at end of year	$(104,988)	$(126,924)	$(6,913)	$(7,896)
Accumulated benefit obligation	$695,375	$770,316	$6,913	$7,896

[1] The actuarial liability (gain) loss amount for the qualified pension plan for 2018 and 2017 is principally due to the effect of changes in the discount rate.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

15. PENSION PLANS (CONTINUED)

Obligations and Funded Status - continued

The Company has recorded liabilities related to our qualified pension plan and SERP as follows:

	At December 31,			
	Qualified Pension Plan		SERP	
	2018	2017	2018	2017
In thousands				
Current liabilities [1]	$—	$—	$(529)	$(942)
Noncurrent liabilities	(104,988)	(126,924)	(6,384)	(6,954)
Total	$(104,988)	$(126,924)	$(6,913)	$(7,896)

[1] The current liabilities are included in other current liabilities on the Consolidated Balance Sheets.

The following table presents amounts included in accumulated other comprehensive income on the Consolidated Balance Sheets that will be recognized as components of pension cost in future periods.

	At December 31,			
	Qualified Pension Plan		SERP	
	2018	2017	2018	2017
In thousands				
Unrecognized loss	$189,047	$173,214	$837	$1,410
Amount included in accumulated other comprehensive income	$189,047	$173,214	$837	$1,410

The amount of unrecognized loss for the qualified pension plan and the SERP, respectively, that will be amortized from accumulated other comprehensive income into net periodic benefit cost over the next year is estimated to be $14.3 million and $0.2 million.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

15. PENSION PLANS (CONTINUED)

Obligations and Funded Status - continued

The pension plan net periodic benefit costs on the Consolidated Statements of Operations and other amounts recognized in other comprehensive income (loss) on the Consolidated Statements of Comprehensive Income and Consolidated Statements of Shareholders' Equity were computed using the projected unit credit actuarial cost method and included the following components:

	For the year ended December 31,					
	Qualified Pension Plan			SERP		
	2018	2017	2016	2018	2017	2016
In thousands						
Service cost for benefits earned during the year	$4,897	$4,794	$4,596	$—	$—	$—
Interest cost on projected benefit obligation	23,804	24,358	24,488	246	241	254
Expected return on plan assets	(47,841)	(42,049)	(40,767)	—	—	—
Recognized net loss	11,370	13,943	12,694	248	146	182
Additional amount recognized due to curtailment/settlement	—	—	—	46	305	—
Net pension benefit (income) cost	$(7,770)	$1,046	$1,011	$540	$692	$436
Change in net gain or (loss)	27,203	(6,607)	19,126	(325)	347	155
Amortization of net loss	(11,370)	(13,943)	(12,694)	(248)	(146)	(182)
Total recognized in other comprehensive income (loss)	$15,833	$(20,550)	$6,432	$(573)	$201	$(27)
Total recognized in net periodic benefit cost and other comprehensive income (loss)	$8,063	$(19,504)	$7,443	$(33)	$893	$409

The following tables show the amount of the contributions made to the Qualified Pension Plan and SERP during each period and the amount of contributions the Company expects to make during 2019:

	Qualified Pension Plan		SERP	
	2018	2017	2018	2017
In thousands				
Contributions	$30,000	$10,000	$949	$3,056

	Qualified Pension Plan	SERP
In thousands		
Expected contributions during 2019	$ —	$ 529

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

15. PENSION PLANS (CONTINUED)

Obligations and Funded Status - continued

Expected future benefit payments, which reflect expected future service, are as follows:

	Qualified Pension Plan	SERP
In thousands		
2019	$ 36,610	$529
2020	$ 38,300	$515
2021	$ 39,608	$2,288
2022	$ 41,263	$483
2023	$ 42,510	$463
2024-2028	$ 222,110	$1,969

Mortality is a key assumption in developing actuarial estimates, and therefore could significantly impact the valuation of the Company's obligations under the qualified pension plan and SERP. The Company reviewed the mortality data and based on the size and demographics of the plan's participant population, the Company determined the RP-2014/MP-2018 Blue Collar mortality table was the most appropriate assumption.

Since 2014, the Company has been using the Financial Times Stock Exchange ("FTSE") Pension Liability Index, as it is deemed to be the most appropriate basis for generating the Company's discount rate assumption, as the future cash flows of the plan are most closely aligned to the Above Median Double-A Curve. The discount rates used in determining benefit obligations of the pension plans are as follows:

	At December 31,			
	Qualified Pension Plan		SERP	
	2018	2017	2018	2017
Discount rate	4.17%	3.50%	3.88%	3.15%

The actuarial assumptions used in determining the net periodic benefit cost of the pension plans are as follows:

	For the year ended December 31,			
	Qualified Pension Plan		SERP	
	2018	2017	2018	2017
Discount rate	3.50%	3.98%	3.15%	3.43%
Expected return on plan assets	7.50%	7.50%	N/A	N/A
Average rate of increase in compensation levels	N/A	N/A	N/A	N/A

Other

The Company utilizes a "spot rate approach" in the calculation of pension interest and service cost. The spot rate approach applies separate discount rates for each projected benefit payment in the calculation of pension interest and service cost.

In accordance with ASU 2015-07, "Compensation - Retirement Benefits (Topic 715) - Improving the Net Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost", the Company disaggregated the service cost component from the other components of net benefit cost, which were presented in the income statement separately from the service cost component outside of operating profit. This ASU was applied retrospectively. See

Note 1, Summary of Significant Accounting Policies, and Note 2, Accounting Changes, for further information.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

15. PENSION PLANS (CONTINUED)

Qualified Pension Plan Assets

The expected return on plan assets rate was determined based upon historical returns adjusted for estimated future market fluctuations. For 2018 and 2017, the expected rate of return on plan assets was 7.5%. During 2018, the actual return on pension plan assets, net of expenses, was (7.2)%.

Plan assets are invested in a diversified portfolio consisting of equity and fixed income securities. The investment goals for pension plan assets are to improve and/or maintain the Plan's funded status by generating long-term asset returns that exceed the rate of growth of the Plan's liabilities. The Plan invests assets in a manner that seeks to (a) maximize return within reasonable and prudent levels of risk of loss of funded status; and (b) maintain sufficient liquidity to meet benefit payment obligations and other periodic cash flow requirements on a timely basis. The return generation/liability matching asset allocation ratio is currently 43.8%/56.2%. As the plan's funded status changes, the pension plan's Administrative Committee (the management committee that is responsible for plan administration) will act through an immediate or gradual process, as appropriate, to reallocate assets.

Under the current investment policy, no Investment Manager may invest in investments deemed illiquid by the Investment Manager at the time of purchase, development programs, real estate, mortgages or private equities or securities of Kaman Corporation without prior written authorization from the Pension Administrative Committee. In addition, with the exception of USG securities, managers' holdings in the securities of any one issuer, at the time of purchase, may not exceed 7.5% of the total market value of that manager's account.

The pension plan assets are valued at fair value. The following is a description of the valuation methodologies used for the investments measured at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Short-term Investments – This investment category consists of cash and cash equivalents and futures and options contracts. Cash and cash equivalents are comprised of investments with maturities of three months or less when purchased, including certain short-term fixed-income securities, and are classified as Level 1 investments. Futures contracts and options contracts requiring the investment managers to receive from or pay to the broker an amount of cash equal to daily fluctuations are included in short-term investments and are classified as Level 2 investments.

Corporate Stock – This investment category consists primarily of domestic common stock issued by U.S. corporations. Common shares are traded actively on exchanges and price quotes for these shares are readily available. Holdings of corporate stock are classified as Level 1 investments.

Mutual Funds –Mutual funds are traded actively on public exchanges. The share prices for these mutual funds are published at the close of each business day. Holdings of mutual funds are classified as Level 1 investments.

Common Trust Funds – Common trust funds are comprised of shares or units in commingled funds that are not publicly traded. The values of the commingled funds are not publicly quoted and must trade through a broker. For equity and fixed-income commingled funds traded through a broker, the fund administrator values the fund using the net asset value ("NAV") per fund share, derived from the value of the underlying assets. The underlying assets in these funds (equity securities, fixed income securities and commodity-related securities) are publicly traded on exchanges and price quotes for the assets held by these funds are readily available. Holdings of common trust funds are not subject to leveling.

Fixed Income Securities - For fixed income securities, multiple prices and price types are obtained from pricing vendors whenever possible, which enables cross-provider validations. A primary price source is identified based on asset type, class or issue for each security. The fair values of fixed income securities are based on evaluated prices that reflect observable market information, such as actual trade information of similar securities, adjusted for observable differences, and are categorized as Level 2. These securities are primarily investment grade securities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

15. PENSION PLANS (CONTINUED)

Qualified Pension Plan Assets - continued

The fair values of the Company’s qualified pension plan assets at December 31, 2018 and 2017, are as follows:

In thousands	Total Carrying Value at December 31, 2018	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Not subject to leveling
Short-term investments:					
Cash and cash equivalents	$ 17,752	$ 17,752	$ —	$ —	$ —
Futures contracts - assets	4,023	—	4,023	—	—
Futures contracts - liabilities	—	—	—	—	—
Fixed income securities	151,895	—	151,895	—	—
Mutual funds	99,584	99,584	—	—	—
Common trust funds(1)	281,064	—	—	—	281,064
Corporate stock	34,164	34,164	—	—	—
Subtotal	$ 588,482	$ 151,500	$ 155,918	$ —	$ 281,064
Accrued income/expense	1,905	113	1,740	—	52
Total	$ 590,387	$ 151,613	$ 157,658	$ —	$ 281,116

In thousands	Total Carrying Value at December 31, 2017	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Not subject to leveling
Short term investments:					
Cash and cash equivalents	$ 35,046	$ 35,046	$ —	$ —	$ —
Futures contracts - assets	116	—	116	—	—
Futures contracts - liabilities	(1,384)	—	(1,384)	—	—
Fixed income securities	96,318	—	96,318	—	—
Mutual funds	126,955	126,955	—	—	—
Common trust funds(1)	314,420	—	—	—	314,420
Corporate stock	70,879	70,879	—	—	—
Subtotal	$ 642,350	$ 232,880	$ 95,050	$ —	$ 314,420
Accrued income/expense	1,042	120	873	—	49
Total	$ 643,392	$ 233,000	$ 95,923	$ —	$ 314,469

(1) In accordance with ASU 2015-07, Fair Value Measurement (Topic 820), certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented for the total pension plan assets.

Derivatives are primarily used to manage risk and gain asset class exposure while still maintaining liquidity. Derivative instruments mainly consist of equity futures and interest rate futures.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

15. PENSION PLANS (CONTINUED)

Other Plans

The Company also maintains a Defined Contribution Plan that has been adopted by most of its U.S. subsidiaries. Employees of the adopting employers who meet the eligibility requirements of the plan may participate. Employer matching contributions are made to the plan based on a percentage of each participant’s pre-tax contribution. For each dollar that a participant contributes, up to 5% of compensation, participating subsidiaries make employer contributions of one dollar. Employer contributions to the plan totaled $13.1 million, $12.6 million and $11.9 million in 2018, 2017 and 2016, respectively.

One of the Company's foreign subsidiaries maintains a defined benefit plan of its own for its local employees. The net pension liability associated with this plan was not material as of December 31, 2018 and 2017.

16. OTHER LONG-TERM LIABILITIES

Other long-term liabilities consist of the following:

	At December 31,	
	2018	2017
In thousands		
Supplemental employees' retirement plan ("SERP")	$6,384	$6,954
Deferred compensation	17,885	15,862
Long-term incentive plan	9,821	9,475
Noncurrent income taxes payable	3,371	3,363
Environmental remediation liability	4,610	2,602
Capital leases	6,579	4,985
Other	5,197	3,657
Total	$53,847	$46,898

The Company maintains a non-qualified deferred compensation plan for certain of its employees as well as a non-qualified deferred compensation plan for its Board of Directors. Generally, participants in these plans have the ability to defer a certain amount of their compensation, as defined in the agreement. The deferred compensation liability will be paid out either upon retirement or as requested based upon certain terms in the agreements and in accordance with Internal Revenue Code Section 409A.

Disclosures regarding the assumptions used in the determination of the SERP liabilities are included in Note 15, Pension Plans. Discussions of our environmental remediation liabilities are in Note 11, Environmental Costs, and Note 17, Commitments and Contingencies.

17. COMMITMENTS AND CONTINGENCIES

Asset Retirement Obligations

The Company has unrecorded Asset Retirement Obligation’s (“AROs”) that are conditional upon certain events. These AROs generally include the removal and disposition of non-friable asbestos. The Company has not recorded a liability for these conditional AROs at December 31, 2018, because the Company does not currently believe there is a reasonable basis for estimating a date or range of dates for major renovation or demolition of these facilities. In reaching this conclusion, the Company considered the historical performance of each facility and has taken into account factors such as planned maintenance, asset replacements and upgrades, which, if conducted as in the past, can extend the physical lives of the facilities indefinitely. The Company also considered the possibility of changes in technology and risk of obsolescence in arriving at its conclusion.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

17. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Asset Retirement Obligations - continued

The Company currently leases various properties under leases that give the lessor the right to make the determination as to whether the lessee must return the premises to their original condition, except for normal wear and tear. The Company does not normally make substantial modifications to leased property, and many of the Company's leases either require lessor approval of planned improvements or transfer ownership of such improvements to the lessor at the termination of the lease. Historically the Company has not incurred significant costs to return leased premises to their original condition.

Operating Leases

Rent commitments under various leases for office space, warehouses, land and buildings expire at varying dates from January 2018 to June 2028. The terms of most of these leases are in the range of 3 to 5 years. Some of the Company's leases have rent escalations, rent holidays or contingent rent that are recognized on a straight-line basis over the entire lease term. Material leasehold improvements and other landlord incentives are amortized over the shorter of their economic lives or the lease term, including renewal periods, if reasonably assured. Certain annual rentals are subject to renegotiation, with certain leases renewable for varying periods.

The terms for most machinery and equipment leases range from 3 to 5 years.

Substantially all real estate taxes, insurance and maintenance expenses associated with leased facilities are obligations of the Company. It is expected that in the normal course of business leases that expire will be renewed or replaced by leases on other similar property.

The following minimum future rental payments are required under operating leases that have initial or remaining non-cancellable lease terms in excess of one year as of December 31, 2018:

In thousands	
2019	$27,527
2020	23,568
2021	18,751
2022	12,789
2023	8,712
Thereafter	10,442
Total	$101,789

Lease expense for all operating leases, including leases with terms of less than one year, amounted to $29.1 million, $28.0 million and $27.3 million for 2018, 2017 and 2016, respectively.

Capital Leases

During 2014, the Company entered into a master leasing agreement with PNC for financing the purchases of equipment. Since that date, the Company has amended the master leasing agreement with PNC to increase the total capacity to $20.0 million as of December 31, 2018. Such leases are classified as capital for accounting purposes and are recorded at the present value of the future minimum lease payments at the inception of the lease. Amounts due under capital leases are recorded as liabilities, and assets acquired under capital leases are recorded as equipment.

Amortization of assets recorded under capital leases is included in depreciation and amortization expense.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

17. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Capital Leases - continued

The following minimum payments are required under capital leases that have initial or remaining non-cancellable lease terms in excess of one year as of December 31, 2018:

In thousands	
2019	$1,989
2020	2,014
2021	1,840
2022	1,491
2023	990
Thereafter	245
Total	$8,569

Interest expense related to capital leases was immaterial in 2018, 2017 and 2016. See Note 9, Property, Plant and Equipment, Net, for additional information regarding our capital leases.

Other Matters

Pension Freeze

Effective December 31, 2015, the Company's qualified pension plan was frozen with respect to future benefit accruals. Under CAS 413 the Company must determine the USG’s share of any pension curtailment adjustment calculated in accordance with CAS. Such adjustments can result in an amount due to the USG for pension plans that are in a surplus position or an amount due to the contractor for plans that are in a deficit position. During the fourth quarter of 2016, the Company accrued a $0.3 million liability representing our estimate of the amount due to the USG based on the Company's pension curtailment adjustment calculation, which was submitted to the USG for review in December 2016. The Company has maintained its accrual at $0.3 million as of December 31, 2018. There can be no assurance that the ultimate resolution of this matter will not have a material adverse effect on the Company's results of operations, financial position and cash flows.

Aerospace Claim Matter

In October 2017, the Company received a letter from a customer seeking to recover $12.4 million associated with the rework of certain aerostructures components previously delivered by the Company to the customer and related costs incurred by the customer. The Company does not believe the claim has merit and continues to defend against the claim. The Company estimates the cost to rework the aerostructure components delivered to the customer over the time period in question is approximately $0.2 million. Based on this analysis, the Company has accrued $0.2 million, the estimated cost to rework the aerostructure components, as of December 31, 2018. The parties continue to engage in discussions in an effort to resolve the matter; however, there can be no assurance that the ultimate resolution of this matter will not have a material adverse effect on the Company's results of operations, financial position and cash flows.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

17. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Other Matters - continued

Offset Agreement

During January 2018, the Company entered into an offset agreement as a condition to obtaining orders from a foreign customer for the Company's JPF product. This agreement is designed to return economic value to the foreign country by requiring the Company to engage in activities supporting local defense or commercial industries, promoting a balance of trade, developing in-country technology capabilities or addressing other local development priorities. The offset agreement may be satisfied through activities that do not require a direct cash payment, including transferring technology, providing manufacturing, training and other consulting support to in-country projects and the purchase by third parties of supplies from in-country vendors. This agreement may also be satisfied through the Company's use of cash for activities, such as subcontracting with local partners, purchasing supplies from in-country vendors, providing financial support for in-country projects and making investments in local ventures. At December 31, 2018, the offset agreement had an outstanding notional value of approximately $194.0 million, which is equal to sixty percent of the contract value of $324.0 million as defined by the agreement between the customer and the Company. The amount ultimately applied against the offset agreement is based on negotiations with the customer and may require cash outlays that represent only a fraction of the notional value in the offset agreement.

The Company is currently in the process of developing a proposal to satisfy the offset requirements that will be submitted to the customer within the first half of 2019. The Company expects approval of the proposal by the end of 2019. The satisfaction of the offset requirements will be determined by the customer and is expected to occur over a seven-year period. In the event the offset requirements of the contract are not met, the Company could be liable for potential penalties up to $16.5 million payable to the customer. The Company has not recognized any revenue associated with this contract and has considered the potential penalties of $16.5 million as a reduction to the transaction price in its determination of the value of the remaining performance obligations within this contract.

Employee-Related Tax Matter

During 2018, the Company identified certain individuals at one of its foreign subsidiaries who were potentially misclassified as self-employed persons performing services for the subsidiary, as opposed to being classified as employees of the subsidiary. The Company is currently investigating the misclassification of these individuals and the potential liability for any associated social contributions, interest and fines and/or penalties as a result of the misclassification. Based on the findings to date, the Company has accrued $2.5 million, which represents the Company's best estimate of potentially unpaid social security contributions, related interest and possible penalties. There can be no assurance that the ultimate resolution of this matter will not have a material adverse effect on the Company's results of operations, financial position and cash flows.

New Hartford

In connection with sale of the Company’s Music segment in 2007, the Company assumed responsibility for meeting certain requirements of the Transfer Act that applied to our transfer of the New Hartford, Connecticut, facility leased by that segment for guitar manufacturing purposes (“Ovation”). Under the Transfer Act, those responsibilities essentially consist of assessing the site's environmental conditions and remediating environmental impairments, if any, caused by Ovation's operations prior to the sale. The site is a multi-tenant industrial park, in which Ovation and other unrelated entities lease space. The environmental assessment, which began in 2008, has been completed and site remediation is in process.

The Company's estimate of its portion of the cost to assess the environmental conditions and remediate this site is $2.3 million, all of which has been accrued. The total amount paid to date in connection with these environmental remediation activities is $1.6 million. At December 31, 2018, the Company had $0.7 million accrued for these environmental remediation activities. A portion ($0.1 million) of the accrual related to this property is included in other current liabilities and the balance is included in other long-term liabilities. The remaining balance of the accrual reflects the total anticipated cost of completing these environmental remediation activities. Although it is reasonably possible that additional costs will be paid in connection with the resolution of this matter, the Company is unable to estimate the amount of such additional costs, if any, at this time.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

17. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Other Matters - continued

Bloomfield

In connection with the Company’s 2008 purchase of the portion of the Bloomfield campus that Kaman Aerospace Corporation had leased from NAVAIR, the Company assumed responsibility for environmental remediation at the facility as may be required under the Transfer Act and is currently remediating the property under the guidance of the Connecticut Department of Environmental Protection ("CTDEP"). The assumed environmental liability of $10.3 million was determined by taking the undiscounted estimated remediation liability of $20.8 million and discounting it at a rate of 8%. This remediation process will take many years to complete. The total amount paid to date in connection with these environmental remediation activities is $13.8 million. At December 31, 2018, the Company had $2.1 million accrued for these environmental remediation activities. A portion ($0.5 million) of the accrual related to this property is included in other current liabilities, and the balance is included in other long-term liabilities. Although it is reasonably possible that additional costs will be paid in connection with the resolution of this matter, the Company is unable to estimate the amount of such additional costs, if any, at this time.

Rimpar

In connection with the Company's purchase of GRW, the Company assumed responsibility for the environmental remediation at the Rimpar, Germany facility. As part of the purchase price allocation, the Company initially accrued approximately $4.2 million during the year ended December 31, 2015. In 2016, the Company completed a Phase II assessment in order to better understand the extent of the environmental effort necessary to remediate the facility. Based on this assessment, the Company adjusted the accrual to $0.5 million, as results of the assessment indicate a lower level of remediation effort will be required. The total amount paid to date in connection with these environmental remediation activities is $0.2 million. The balance ($0.3 million) of the accrual related to this property is included in other current liabilities. Although it is reasonably possible that additional costs will be paid in connection with the resolution of this matter, the Company is unable to estimate the amount of such additional costs, if any, at this time.

18. COMPUTATION OF EARNINGS PER SHARE

The computation of basic earnings per share is based on net earnings divided by the weighted average number of shares of common stock outstanding for each year. The computation of diluted earnings per share includes the common stock equivalency of dilutive options granted to employees under the Company's stock incentive plan and shares issuable on redemption of its Convertible Notes.

	For the Year Ended December 31,		
	2018	2017	2016
In thousands, except per share amounts			
Net earnings	$54,169	$49,826	$58,854
Basic:			
Weighted average number of shares outstanding	27,945	27,611	27,107
Basic earnings per share	$1.94	$1.80	$2.17
Diluted:			
Weighted average number of shares outstanding	27,945	27,611	27,107

Weighted average shares issuable on exercise of dilutive stock options	208	160	141
Weighted average shares issuable on exercise of convertible notes	37	466	773
Weighted average shares issuable on exercise of warrants related to 2017 Notes	33	181	51
Total	28,223	28,418	28,072
Diluted earnings per share	$1.92	$1.75	$2.10

18. COMPUTATION OF EARNINGS PER SHARE (CONTINUED)

Equity awards

Excluded from the diluted earnings per share calculation for the years ended December 31, 2018, 2017 and 2016, respectively, are 186,115, 245,361 and 472,328 shares associated with equity awards granted to employees that are anti-dilutive based on the average stock price.

2017 Convertible Notes

For the year ended December 31, 2018, there were no shares issuable under the 2017 Notes. For the years ended December 31, 2017 and 2016, shares issuable under the 2017 Notes that were dilutive during the period were included in the calculation of earnings per share as the conversion price for the Convertible Notes was less than the average share price of the Company's stock.

2024 Convertible Notes

For the year ended December 31, 2018, shares issuable under the 2024 Notes were included in the calculation of diluted earnings per share as the conversion price for the Convertible Notes was less than the average share price of the Company's stock. For the year ended December 31, 2017, shares issuable under the 2024 Notes were excluded from the calculation of earnings per share as the conversion price for the Convertible Notes was greater than the average share price of the Company's stock.

Warrants

For the years ended December 31, 2018, 2017 and 2016, shares issuable under the warrants sold in connection with the Company’s 2017 Convertible Note offering were included in the calculation of diluted earnings per share as the strike price of the warrants was less than the average share price of the Company’s stock. For further information on the Convertible Notes, see Note 12, Debt.

19. SHARE-BASED ARRANGEMENTS

General

The Company accounts for stock options, restricted stock awards, restricted stock units and performance shares as equity awards and measures the cost of all share-based payments, including stock options, at fair value on the grant date and recognizes this cost in the statement of operations. The Company also has an employee stock purchase plan which is accounted for as a liability award.

Compensation expense for stock options, restricted stock awards and restricted stock units is recognized on a straight-line basis over the vesting period of the awards. Share-based compensation expense recorded for the years ended December 31, 2018, 2017 and 2016 was \$6.5 million, \$6.0 million and \$5.7 million, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

19. SHARE-BASED ARRANGEMENTS (CONTINUED)

Stock Incentive Plan

On April 17, 2013, the shareholders of the Company approved the 2013 Management Incentive Plan (the "2013 Plan"), which replaced the 2003 Stock Incentive Plan. The 2013 Plan provides the Company with the ability to use equity-based awards of up to 2,250,000 authorized shares and is designed as a flexible share authorization plan, such that the Company's share authorization is based on the least costly type of award (stock options). Shares issued pursuant to “Full Value Awards” as defined in the 2013 Plan (awards other than stock options or stock appreciation rights which are settled by the issuance of shares, e.g., restricted stock, restricted stock units, performance shares, performance units if settled with stock, or other stock-based awards) count against the 2013 Plan's share authorization at a rate of 3 to 1, while shares issued upon exercise of stock options or stock appreciation rights count against the share authorization at a rate of 1 to 1. This means that every time an option is granted, the authorized pool of shares is reduced by one (1) share and every time a Full Value Award is granted, the authorized pool of shares is reduced by 3 shares. In deriving the valuation ratio used in the 2013 Plan, the Company used the Black Scholes Fair Value model as the basis for determining the approximate value of an option as compared to a "full value share." On April 18, 2018, the shareholders of the Company approved the amendment and restatement of the 2013 Plan, which increased the number of authorized shares by 2,250,000 shares. As of December 31, 2018, there were 2,482,935 shares available for grant under the plan.

LTIP awards provide certain senior executives an opportunity to receive award payments in either stock or cash as determined by the Personnel and Compensation Committee of the Board of Directors in accordance with the Plan, at the end of each performance cycle. Prior to 2018, performance was based on the Company’s financial results compared to the Russell 2000 indices for the same periods based upon the following metrics: (a) average return on total capital, (b) average earnings per share growth and (c) total return to shareholders for the performance period. Beginning in 2018, the performance metrics were changed to the following: (a) average return on total capital and (b) total return to shareholders, both compared to the Russell 2000 indices for the same performance period. No awards will be payable if the Company’s performance is below the 25th percentile. The maximum award is payable if performance reaches the 75th percentile of the designated indices. Awards are paid out at 100% at the 50th percentile. Awards for performance between the 25th and 75th percentiles are determined by straight-line interpolation between 0% and 200%. Generally, LTIP awards are paid in cash.

Stock options are granted with an exercise price equal to the average market price of our stock at the date of grant. Stock options and Stock Appreciation Rights ("SARs") granted under the plan generally expire ten years from the date of grant and vest 20% each year over a 5-year period on each of the first five anniversaries of the date of grant. Restricted Stock Awards ("RSAs") are generally granted with restrictions that lapse at the rate of 20% per year over a 5-year period on each of the first five anniversaries of the date of grant. Generally, these awards are subject to forfeiture if a recipient separates from service with the Company.

From time-to-time, the Company has issued stock awards with market and performance based conditions. Currently, there are three awards with these conditions that have not been settled. The number of shares earned under an award granted in 2014 has been determined at a 139.9% achievement level, representing 1,506 shares to be delivered in 2019. The number of shares earned under an award granted in 2015 has been determined at a 142.3% achievement level, representing 1,573 shares to be delivered in 2019. The remaining shares for the award granted in 2016 has not yet been determined; however, assuming a 100% achievement level, the number of shares would be 1,060. The Company measures the cost of these awards based on their grant date fair value to the extent of the probable number of shares to be earned upon vesting. Amortization of this cost is recorded on a straight-line basis over the requisite service period. Throughout the course of the requisite service period, the Company monitors the level of achievement compared to the target and adjusts the number of shares expected to be earned, and the related compensation expense recorded thereafter, to reflect the updated most probable outcome. Compensation expense for these awards for the years ended December 31, 2018, 2017 and 2016, was not material.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

19. SHARE-BASED ARRANGEMENTS (CONTINUED)

Stock Incentive Plan - continued

Stock option activity is as follows:

	Options	Weighted average-exercise price
Options outstanding at December 31, 2017	925,385	$ 40.43
Granted	199,510	62.46
Exercised	(162,663)	34.54
Forfeited or expired	(26,980)	48.93
Options outstanding at December 31, 2018	935,252	$ 45.91

The following table presents information regarding options outstanding as of December 31, 2018:

Weighted-average remaining contractual term - options outstanding (years)	6.4
Aggregate intrinsic value - options outstanding (in thousands)	$10,123
Weighted-average exercise price - options outstanding	$45.91
Options exercisable	374,911
Weighted-average remaining contractual term - options exercisable (years)	4.5
Aggregate intrinsic value - options exercisable (in thousands)	$6,738
Weighted-average exercise price - options exercisable	$37.27

The intrinsic value represents the amount by which the market price of the stock on the measurement date exceeds the exercise price of the option. The intrinsic value of options exercised in 2018, 2017 and 2016 was $5.2 million, $3.9 million and $3.9 million, respectively. The Company currently has an open stock repurchase plan, which would enable the Company to repurchase shares as needed. Since 2008 the Company has generally issued shares related to option exercises and RSAs from its authorized but unissued common stock.

The fair value of each option award is estimated on the date of grant using the Black-Scholes option valuation model. The following table indicates the weighted-average assumptions used in estimating fair value:

	2018	2017	2016
Expected option term (years)	4.9	5.0	5.2
Expected volatility	18.1 %	19.9 %	26.0 %
Risk-free interest rate	2.6 %	1.9 %	1.2 %
Expected dividend yield	1.5 %	1.6 %	1.8 %
Per share fair value of options granted	$10.65	$8.61	$8.63

The expected term of options granted represents the period of time option grants are expected to be outstanding based upon historical exercise patterns. Forfeitures of options are estimated based upon historical data and are adjusted based upon actual occurrences. The cumulative effect of stock award forfeitures was immaterial. The volatility assumption is based on the historical daily price data of the Company’s stock over a period equivalent to the weighted-average expected term of the options. Management evaluated whether there were factors during that period that were unusual and would distort the volatility figure if used to estimate future volatility and concluded that there were no such factors. The Company relies only on historical volatility since future volatility is expected to be consistent with historical volatility.

The risk-free interest rate assumption is based upon the interpolation of various U.S. Treasury rates determined at the date of option grant. Expected dividends are based upon a historical analysis of our dividend yield over the past year.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

19. SHARE-BASED ARRANGEMENTS (CONTINUED)

Stock Incentive Plan - continued

Restricted Stock Award and Restricted Stock Unit activity is as follows:

	Restricted Stock Awards		Weighted-average grant date fair value
Restricted Stock outstanding at December 31, 2017	154,882		$ 44.50
Granted	61,747		62.63
Vested	(64,389	)	48.80
Forfeited or expired	(8,543	)	50.95
Restricted Stock outstanding at December 31, 2018	143,697		$ 49.97

The grant date fair value for restricted stock is the average market price of the unrestricted shares on the date of grant. The total fair value of restricted stock awards vested during 2018, 2017 and 2016 was $3.6 million, $5.7 million and $4.3 million, respectively.

The Company records a tax benefit and associated deferred tax asset for compensation expense recognized on non-qualified stock options and restricted stock for which the Company is allowed a tax deduction. For 2018, 2017 and 2016, respectively, the Company recorded a tax benefit of $1.4 million, $2.0 million and $2.0 million for these two types of compensation expense.

As of December 31, 2018, future compensation costs related to non-vested stock options and restricted stock grants is $6.5 million. The Company anticipates that this cost will be recognized over a weighted-average period of 3.0 years.

Employees Stock Purchase Plan

The Kaman Corporation Employees Stock Purchase Plan (“ESPP”) allows employees to purchase common stock of the Company, through payroll deductions, at 85% of the market value of shares at the time of purchase. The plan provides for the grant of rights to employees to purchase a maximum of 2,000,000 shares of common stock.

During 2018, 59,082 shares were issued to employees at prices ranging from $56.86 to $72.15. During 2017, 63,874 shares were issued to employees at prices ranging from $46.79 to $57.27. During 2016, 74,273 shares were issued to employees at prices ranging from $32.95 to $42.40. At December 31, 2018, there were 612,109 shares available for purchase under the plan.

20. SEGMENT AND GEOGRAPHIC INFORMATION

The Company is organized based upon the nature of its products and services, and is composed of two operating segments each overseen by a segment manager. These segments are reflective of how the Company’s Chief Executive Officer, who is its Chief Operating Decision Maker (“CODM”), reviews operating results for the purposes of allocating resources and assessing performance. The Company has not aggregated operating segments for purposes of identifying reportable segments.

The Distribution segment is a leading power transmission, motion control, and fluid power industrial distributor with operations throughout the United States. The segment provides electro-mechanical products, bearings, power transmission, motion control and electrical and fluid power components, along with engineered integrated solutions to its customers' most challenging applications serving a broad spectrum of industrial markets, including both MRO and OEM customers.

The Aerospace segment produces and markets proprietary aircraft bearings and components; super precision, miniature ball bearings for the medical, industrial and aerospace markets; complex metallic and composite aerostructures for commercial, military and general aviation fixed and rotary wing aircraft; and safe and arming solutions for missile and bomb systems for the U.S. and allied militaries. The segment also markets the design and supply of aftermarket parts to businesses performing MRO in aerospace markets; performs helicopter subcontract work; restores, modifies and supports the Company's SH-2G Super Seasprite maritime helicopters; and manufactures and supports the Company's K-MAX® manned and unmanned medium-to-heavy lift helicopters.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

20. SEGMENT AND GEOGRAPHIC INFORMATION (CONTINUED)

Summarized financial information by business segment is as follows:

	For the year ended December 31,		
	2018	2017	2016
In thousands			
Net sales:			
Distribution	$1,139,431	$1,080,965	$1,106,322
Aerospace [1]	735,994	724,944	702,054
Net sales	$1,875,425	$1,805,909	$1,808,376
Operating income:			
Distribution [2]	$51,529	$51,372	$40,813
Aerospace [2]	94,357	117,654	112,846
Loss on sale of business	(5,722)	—	—
Net gain (loss) on sale of assets	1,700	256	(11)
Corporate expense [2]	(58,800)	(58,163)	(50,874)
Operating income	83,064	111,119	102,774
Interest expense, net	20,097	20,581	15,747
Non-service pension and post retirement benefit income [2]	(12,127)	(3,056)	(3,149)
Other (income) expense, net	(143)	(784)	472
Earnings before income taxes	75,237	94,378	89,704
Income tax expense	21,068	44,552	30,850
Net earnings	$54,169	$49,826	$58,854

[1] Net sales by the Aerospace segment under contracts with USG agencies (including sales to foreign governments through foreign military sales contracts with USG agencies) totaled $281.3 million, $248.6 million and $244.4 million in 2018, 2017 and 2016, respectively, and represent direct and indirect sales to the USG and related agencies.
[2] The prior year amounts were adjusted to reflect the impact of the adjustments resulting from the adoption of ASU 2017-07, "Compensation - Retirement Benefits (Topic 715) - Improving the Net Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost".

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

20. SEGMENT AND GEOGRAPHIC INFORMATION (CONTINUED)

	At December 31,		
In thousands	2018	2017	2016
Identifiable assets [1]:			
Distribution	$563,883	$537,911	$540,900
Aerospace	785,289	810,278	720,823
Corporate [2]	111,141	107,263	164,563
Total assets	$1,460,313	$1,455,452	$1,426,286
Capital expenditures:			
Distribution	$8,367	$9,621	$9,016
Aerospace	20,199	17,208	17,935
Corporate	1,305	802	2,826
Total capital expenditures	$29,871	$27,631	$29,777
Depreciation and amortization [3]:			
Distribution	$14,154	$15,083	$16,107
Aerospace	24,506	23,717	23,584
Corporate	3,369	3,671	3,702
Total depreciation and amortization	$42,029	$42,471	$43,393

[1] Identifiable assets are year-end assets at their respective net carrying values segregated as to segment and corporate use.
[2] For the periods presented, the corporate identifiable assets are principally comprised of cash, short-term and long-term deferred income tax assets, cash surrender value of life insurance policies and fixed assets.
[3] Depreciation and amortization amounts exclude amortization of debt issuance costs.

Disaggregation of Revenue

The following table disaggregates total revenue by major product line.

	For the year ended December 31,		
	2018	2017	2016
In thousands			
Distribution			
Bearings and Power Transmission	$552,537	$536,143	$548,736
Automation, Control and Energy	362,358	326,117	337,428
Fluid Power	224,536	218,705	220,158
Total Distribution Sales	$1,139,431	$1,080,965	$1,106,322
Aerospace			
Military and Defense, excluding fuzes	$190,264	$201,760	$205,812
Missile and Bomb Fuzes	195,751	184,640	164,187
Commercial Aerospace and Other	349,979	338,544	332,055
Total Aerospace Sales	$735,994	$724,944	$702,054
Total Sales[1]	$1,875,425	$1,805,909	$1,808,376

[1] Service revenue was not material for the years ended December 31, 2018, 2017 and 2016.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

20. SEGMENT AND GEOGRAPHIC INFORMATION (CONTINUED)

Disaggregation of Revenue - continued

The following table illustrates the approximate percentage of revenue recognized for performance obligations satisfied over time versus the amount of revenue recognized for performance obligations satisfied at a point in time for the Aerospace segment:

	December 31, 2018	
Revenue recognized for performance obligations satisfied:		
Over time	48	%
Point-in-time	52	%
Total revenue[1]	100	%

[1] The disaggregation of revenue recognized for performance satisfied over time versus point-in-time has not been included for the Distribution segment, as the majority of its revenue is recognized on a point-in-time basis with less than 2% of revenue recognized for performance obligations over time.

The majority of the Distribution segment's revenue is recognized at the point in time when title transfers to the customer, as this is when the performance obligations are generally controlled by the customer. A small percentage of revenue within the Distribution segment, specifically certain contracts for value-add services, engineering services and repairs, are accounted for over time. The majority of the Distribution segment's revenue is short cycle in nature with shipments occurring within one year from order. Payment terms generally range from 30 to 120 days from delivery.

For the Aerospace segment, the timing related to the satisfaction of performance obligations and the typical timing of payment could vary between military, fuzing and commercial contracts. For the Aerospace segment's military and fuzing contracts with the USG, payment terms typically include progress payments, and the satisfaction of these performance obligations does not vary significantly from timing of payment. For firm-fixed price military and fuzing contracts with foreign militaries, the satisfaction of performance obligations could occur at a point in time or over time, depending on the nature of the performance obligations and the right to payment terms in the contracts. Generally, payment terms for these types of contracts range from 30 to 180 days from delivery; however, at times, the Company may negotiate advance payments to cover a portion of the initial costs. Payment terms for firm-fixed price commercial contracts generally range from 30 to 90 days from delivery. The satisfaction of these performance obligations could occur at a point in time or over time, depending on the nature of the performance obligations and the right to payment terms in the contracts. For certain commercial contracts, the Company may negotiate advance payments for long-lead materials.

Sales are attributed to geographic regions based on the location to which the product is shipped. Geographic distribution of sales recorded is as follows:

	For the year ended December 31,		
	2018	2017	2016
In thousands			
North America	$1,613,334	$1,505,768	$1,514,595
Europe	167,880	169,353	168,456
Middle East	51,747	81,343	61,409
Asia	27,612	35,521	46,805
Oceania	8,783	10,868	13,385
Other	6,069	3,056	3,726
Total	$1,875,425	$1,805,909	$1,808,376

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
For the Years Ended December 31, 2018, 2017 and 2016

20. SEGMENT AND GEOGRAPHIC INFORMATION (CONTINUED)

Geographic distribution of long-lived assets is as follows:

	At December 31,	
	2018	2017
In thousands		
United States	$462,969	$456,023
Germany	160,257	169,782
United Kingdom	32,378	47,486
Czech Republic	6,077	5,448
Mexico	1,091	1,241
Total	$662,772	$679,980

For the purpose of this disclosure the Company excluded deferred tax assets of $24.4 million and $27.6 million as of December 31, 2018 and 2017, respectively.

21. SUBSEQUENT EVENTS

The Company has evaluated subsequent events through the issuance date of these financial statements. No material subsequent events were identified that require disclosure.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company has carried out an evaluation, under the supervision and with the participation of our management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of the Company’s disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that, as of December 31, 2018, the Company's disclosure controls and procedures were effective.

Management’s Report on Internal Control Over Financial Reporting

The Company’s management is responsible for establishing and maintaining adequate 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 reporting purposes in accordance with U.S. generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Management has assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2018.

In making its assessment of the effectiveness of the Company’s internal control over financial reporting as of December 31, 2018, management utilized the criteria set forth by the Committee of Sponsoring Organizations ("COSO") of the Treadway Commission in Internal Control—Integrated Framework (2013). Management concluded that based on its assessment the Company’s internal control over financial reporting was effective as of December 31, 2018. The effectiveness of internal control over financial reporting as of December 31, 2018, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

Management of the Company has evaluated, with the participation of the Company’s Chief Executive Officer and Chief Financial Officer, changes in the Company’s internal controls over financial reporting during 2018.

During the fourth quarter ended December 31, 2018, management made no changes to internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Controls

The Company’s evaluation described in this Item was undertaken acknowledging that there are inherent limitations to the effectiveness of any system of controls, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective controls can only provide reasonable assurance of achieving their control objectives.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Other than the list of executive officers of the Company set forth in Item 1, Executive Officers of the Registrant, all information under this caption may be found in the Company’s proxy statement to be delivered to stockholders in connection with the Annual Meeting of Shareholders, which is scheduled for April 17, 2019, (the “Proxy Statement”) in the following sections: “Election of three Class II Directors for three year terms,” “Information about Nominees and Continuing Directors,” “Section 16(a) Beneficial Ownership Reporting Compliance,” “Director Nominees,” "Code of Business Conduct and Other Governance Documents Available on the Company's Website" and “Audit Committee.” Those portions of the Proxy Statement are incorporated by reference into this Item 10.

ITEM 11. EXECUTIVE COMPENSATION

Information about the compensation of Kaman’s named executive officers appears under the captions "Compensation Discussion and Analysis," "Summary Compensation Table," "Post-Termination Payments and Benefits" and "2018 Pay Ratio Disclosure" in the Proxy Statement. Information about the compensation of Kaman’s directors appears under "Non-Employee Director Compensation" in the Proxy Statement. Information required pursuant to Item 407(d) and (e) of Regulation S-K appears under the captions "Compensation Committee Interlocks and Insider Participation" and "Personnel & Compensation Committee Report." Those portions of the Proxy Statement are incorporated by reference into this Item 11.

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

Information about security ownership of certain beneficial owners and management appears under "Security Ownership of Certain Beneficial Owners and Management" in the Proxy Statement. That portion of the Proxy Statement is incorporated by reference into this Item 12.

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table provides information as of December 31, 2018, concerning Common Stock issuable under the Company’s equity compensation plans.

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders:			
2003 Stock Incentive Plan	165,237	$ 30.97	—

2013 Management Incentive Plan	770,015	49.12	2,482,935
Employees Stock Purchase Plan	—	—	612,109
Equity compensation plans not approved by security holders	—	—	—
Total	935,252	$ 45.91	3,095,044

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

Information about certain relationships and related transactions appears under “Related Party Transactions” and “Board and Committee Independence Requirements” in the Proxy Statement. Those portions of the Proxy Statement are incorporated by reference into this Item 13.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information regarding audit fees and all other fees, in addition to the Audit Committee’s pre-approval policies and procedures appears under “Principal Accounting Fees and Services” and "Audit Committee Preapproval Policy" in the Proxy Statement. Those portions of the Proxy Statement are incorporated by reference into this Item 14.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULE

(a)(1)	FINANCIAL STATEMENTS.	Page Number in Form 10-K
	See Item 8 of this Form 10-K setting forth our Consolidated Financial Statements.	63

(a)(2) FINANCIAL STATEMENT SCHEDULE.

KAMAN CORPORATION AND SUBSIDIARIES
SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS
YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016
(Dollars in Thousands)

DESCRIPTION	Balance Beginning of Period	Additions Charged to Costs and Expenses	Others (A)	Deductions (B)	Balance End of Period
2018					
Allowance for doubtful accounts	$ 4,134	$ 1,123	$ —	$ 1,143	$ 4,114
2017					
Allowance for doubtful accounts	$ 4,123	$ 1,164	$ —	$ 1,153	$ 4,134
2016					
Allowance for doubtful accounts	$ 2,989	$ 2,635	$ 19	$ 1,520	$ 4,123

(A) Additions to allowance for doubtful accounts attributable to acquisitions.
(B) Recoveries and write-off of bad debts.

DESCRIPTION	Balance Beginning of Period	Additions (Reductions) Current Year Provision (Benefit)	Others	Balance End of Period
2018				
Valuation allowance on deferred tax assets	$ 5,298	$ 3,408	$ (173)	$ 8,533
2017				
Valuation allowance on deferred tax assets	$ 4,143	$ 830	$ 325	$ 5,298
2016				
Valuation allowance on deferred tax assets	$ 11,122	$ 269	$ (7,248)	$ 4,143

(a)(3)	EXHIBITS.	Page Number in Form 10-K
	An index to the exhibits filed or incorporated by reference immediately precedes such exhibits.	133

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Bloomfield, State of Connecticut, on this 25th day of February 2019.

KAMAN CORPORATION
(Registrant)

By: /s/ Neal J. Keating
Neal J. Keating
Chairman, President,
Chief Executive Officer and Director

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:
/s/ Neal J. Keating Neal J. Keating	Chairman, President, Chief Executive Officer and Director (Principal Executive Officer)	February 25, 2019
/s/ Robert D. Starr Robert D. Starr	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 25, 2019
/s/ John J. Tedone John J. Tedone	Vice President – Finance and Chief Accounting Officer (Principal Accounting Officer)	February 25, 2019
/s/ Neal J. Keating Neal J. Keating Attorney-in-Fact for:		February 25, 2019
Brian E. Barents	Director	
E. Reeves Callaway III	Director	
Karen M. Garrison	Director	
A. William Higgins	Director	
Scott E. Kuechle	Director	
George E. Minnich	Director	
Jennifer M. Pollino	Director	
Thomas W. Rabaut	Director	
Richard J. Swift	Director	

KAMAN CORPORATION
INDEX TO EXHIBITS

Exhibit 3.1	Amended and Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated November 4, 2005, File No. 333-66179).	Previously Filed
Exhibit 3.2	Amended and Restated Bylaws of the Company (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated June 9, 2017, File No. 001-35419).	Previously Filed
Exhibit 4.1	Indenture, dated as of May 12, 2017, by and between Kaman Corporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.1	Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Annex A to the Company's Definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on March 1, 2013, File No. 001-35419).*	Previously Filed
Exhibit 10.2	First Amendment to the Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated February 23, 2015, File No. 001-35419).*	Previously Filed
Exhibit 10.3	Kaman Corporation Amended and Restated 2013 Management Incentive Plan. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 23, 2018, File No. 001-35419).*	Previously Filed
Exhibit 10.4	Form of Nonqualified Stock Option Agreement under the Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated February 24, 2014, File No. 001-35419).*	Previously Filed
Exhibit 10.5	Form of Restricted Share Agreement under the Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated February 24, 2014, File No. 001-35419).*	Previously Filed
Exhibit 10.6	Form of Restricted Stock Unit Agreement under the Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K dated June 6, 2014, File No 001-35419).*	Previously Filed
Exhibit 10.7	Form of Long-Term Performance Award Agreement (Payable in Cash) under the Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated February 24, 2014, File No. 001-35419).*	Previously Filed
Exhibit 10.8	Form of Long-Term Performance Award Agreement (Payable in Cash) granted under the Kaman Corporation 2013 Management Incentive Plan, for awards granted on or after February 17, 2017 (incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q for the fiscal quarter ended March 31, 2017, File No. 001-35419).*	Previously Filed
Exhibit 10.9	Form of Long-Term Performance Award Agreement (Payable in Shares) granted under the Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K dated February 24, 2014, File No. 001-35419).*	Previously Filed

Exhibit 10.10	Form of Award Agreement for Non-Employee Directors under the Kaman Corporation 2013 Management Incentive Plan (incorporated by reference to Exhibit 10.6 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2013, File No. 001-35419).*	Previously Filed

Exhibit 10.11	Kaman Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10(a)(i) to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended October 2, 2009, File No. 000-01093), as amended by amendments thereto filed with the SEC on April 7, 2010 (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K dated April 7, 2010, File No. 000-01093) and November 1, 2010 (incorporated by reference to Exhibit 10(b) to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended October 1, 2010, File No. 000-01093), and February 22, 2012 (incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K, dated February 22, 2012, File No. 000-01093).*	Previously Filed
Exhibit 10.12	Form of Incentive Stock Option Agreement under the Kaman Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10h(i) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, File No. 000-01093).*	Previously Filed
Exhibit 10.13	Form of Non-Statutory Stock Option Agreement under the Kaman Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10h(ii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, File No. 000-01093).*	Previously Filed
Exhibit 10.14	Form of Stock Appreciation Rights Agreement under the Kaman Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10h(iii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, File No. 000-01093).*	Previously Filed
Exhibit 10.15	Form of Restricted Stock Agreement under the Kaman Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10h(iv) to the Company's Form 10-Q for the fiscal quarter ended June 29, 2007, File No. 000-01093).*	Previously Filed
Exhibit 10.16	Form of Long Term Performance Award Agreement under the Kaman Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10h(v) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011, File No. 001-35419).*	Previously Filed
Exhibit 10.17	Form of Restricted Stock Unit Agreement under the Kaman Corporation 2003 Stock Incentive Plan (incorporated by reference to Exhibit 10h(vi) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, File No. 000-10093).*	Previously Filed
Exhibit 10.18	Kaman Corporation Employees Stock Purchase Plan (incorporated by reference to Exhibit 10(a) to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended October 1, 2010, File No. 000-01093), as amended by the First Amendment thereto filed with the SEC on February 27, 2012 (incorporated by reference to Exhibit 10b to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011, File No. 001-35419), the Second Amendment thereto filed with the SEC on February 25, 2013 (incorporated by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, File No. 001-35419) and the Third Amendment thereto filed with the SEC on February 27, 2014 by reference to Exhibit 10.15 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2013, File No. 001-35419).*	Previously Filed
Exhibit 10.19	Kaman Corporation Amended and Restated Employee Stock Purchase Plan. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on April 23, 2018, File No. 001-35419), as amended by the First Amendment thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated November 15, 2018, File No. 001-35419).*	Previously Filed

Exhibit 10.20	Kaman Corporation Supplemental Employees' Retirement Plan (incorporated by reference to Exhibit 10c to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2000, File No. 333-66179), as amended by an amendment thereto filed with the SEC on March 5, 2004 (incorporated by reference to Exhibit 10c to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003, File No. 333-66179), and an amendment thereto filed with the SEC on February 26, 2007 (incorporated by reference to Exhibit 10.10 to the Company's Current Report on Form 8-K, dated February 26, 2007, File No. 000-01093).*	Previously Filed
Exhibit 10.21	Post-2004 Supplemental Employees' Retirement Plan (incorporated by reference to Exhibit 10.11 to the Company's Current Report on Form 8-K, dated February 26, 2007, File No. 000-01093), as amended by the First Amendment thereto filed with the SEC on February 28, 2008 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, dated February 28, 2008, File No. 000-01093) and the Second Amendment thereto filed with the SEC on February 25, 2010 (incorporated by reference to Exhibit 10(c)(iii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, File No. 000-01093).*	Previously Filed
Exhibit 10.22	Kaman Corporation Amended and Restated Deferred Compensation Plan (incorporated by reference to Exhibit 10d to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2002, File No. 333-66179), as amended by an amendment thereto filed with the SEC on March 5, 2004 (incorporated by reference to Exhibit 10d to the Company's Annual report on Form 10-K for the fiscal year ended December 31, 2003 File No. 333-66179), and an amendment thereto filed with the SEC on August 3, 2004 (incorporated by reference to Exhibit 10(a) to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2004, File No. 333-66179).*	Previously Filed
Exhibit 10.23	Kaman Corporation Post-2004 Deferred Compensation Plan (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, dated February 28, 2008, File No. 000-01093), as amended by the First Amendment thereto filed with the SEC on February 27, 2012 (incorporated by reference to Exhibit 10d(ii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011, File No. 001-35419), the Second Amendment thereto (incorporated by reference to Exhibit 10.20 to the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2013, File No. 001-35419), the Third Amendment thereto (incorporated by reference to Exhibit 10.3 to the Company’s Current Report on Form 8-K dated November 21, 2014, File No. 001-35419) and the Fourth Amendment thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated June 13, 2016, File No. 001-35419). *	Previously Filed
Exhibit 10.24	Amended and Restated Executive Employment Agreement between Kaman Corporation and Neal J. Keating, originally dated as of August 7, 2007 and amended and restated as of November 11, 2008 (incorporated by reference to Exhibit 10g(xviii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, File No. 000-01093), as amended by Amendment No. 1 thereto dated January 1, 2010 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, dated February 23, 2010, File No. 000-01093), Amendment No. 2 thereto dated September 17, 2010 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, dated September 20, 2010, File No. 000-01093), and Amendment No. 3 thereto dated November 18, 2014 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, dated November 21, 2014, File No. 000-01093).*	Previously Filed
Exhibit 10.25	Executive Employment Agreement between Kaman Corporation and Robert D. Starr, dated as of November 18, 2014 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on	Previously Filed

	Form 8-K dated November 21, 2014, File No. 001-35419).*	
Exhibit 10.26	Offer Letter between Kaman Corporation and Richard R. Barnhart effective as of September 24, 2017 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated September 21, 2017, File No. 001-35419).	Previously Filed

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Exhibit 10.27	Form of Amended and Restated Change in Control Agreement by and between the Company and each of its executive officers (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated April 22, 2016, File No. 001-35419).*	Previously Filed
Exhibit 10.28	Call Option Termination Agreement, dated May 8, 2017, between Goldman Sachs & Co. LLC and Kaman Corporation (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.29	Call Option Termination Agreement, dated May 8, 2017, between Bank of America, N.A. and Kaman Corporation (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.30	Call Option Termination Agreement, dated May 8, 2017, between The Royal Bank of Scotland plc and Kaman Corporation (incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.31	Warrant Termination Agreement, dated May 8, 2017, between Goldman Sachs & Co. LLC and Kaman Corporation (incorporated by reference to Exhibit 10.9 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.32	Warrant Termination Agreement, dated May 8, 2017, between Bank of America, N.A. and Kaman Corporation (incorporated by reference to Exhibit 10.10 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.33	Warrant Termination Agreement, dated May 8, 2017, between The Royal Bank of Scotland plc and Kaman Corporation (incorporated by reference to Exhibit 10.11 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.34	Purchase Agreement, dated May 8, 2017, among Kaman Corporation and J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representatives of the several Initial Purchasers (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.35	Letter Agreement, dated May 8, 2017, between Bank of America, N.A. and Kaman Corporation, regarding the Capped Call Transaction (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.36	Letter Agreement, dated May 8, 2017, between JPMorgan Chase Bank, National Association, London Branch and Kaman Corporation, regarding the Capped Call Transaction (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.37	Letter Agreement, dated May 8, 2017 between UBS AG, London Branch and Kaman Corporation, regarding the Capped Call Transaction (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K dated May 12, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.38	Letter Agreement, dated May 22, 2017, between Bank of America, N.A. and Kaman Corporation, regarding the Additional Capped Call Transaction (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated May 25, 2017, File No. 001-35419).	Previously Filed

Exhibit 10.39	Letter Agreement, dated May 22, 2017, between JPMorgan Chase Bank, National Association, London Branch and Kaman Corporation, regarding the Additional Capped Call Transaction (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated May 25, 2017, File No. 001-35419).	Previously Filed

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Exhibit 10.40	Letter Agreement, dated May 22, 2017, between UBS AG, London Branch and Kaman Corporation, regarding the Additional Capped Call Transaction (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated May 25, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.41	Security Agreement dated as of November 20, 2012 among Kaman Corporation, JPMorgan Chase Bank, N.A., as Administrative Agent and the domestic subsidiary guarantors signatory thereto (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated November 21, 2012, File No. 001-35419.)	Previously Filed
Exhibit 10.42	Amendment and Restatement Agreement, dated as of May 6, 2015, by and among Kaman Corporation, RWG Germany GmbH and Kaman Composites-UK Holdings Limited, as Borrowers, JPMorgan Chase Bank, N.A., as Administrative Agent, and Bank of America, N.A. and Citizens Bank, N.A. as Co-Syndication Agents, including, attached as Exhibit A thereto, the Credit Agreement dated as of November 20, 2012, as amended and restated as of May 6, 2015, among Kaman Corporation, RWG Germany GmbH and Kaman Composites-UK Holdings Limited, as Borrowers, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. and Citizens Bank, N.A. as Co-Syndication Agents, Suntrust Bank, Keybank National Association, TD Bank, N.A., Branch Banking & Trust Company and Fifth Third Bank, as Co-Documentation Agents, and J.P. Morgan Securities LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Citizens Bank, N.A., as Joint Bookrunners and Joint Lead Arrangers, and various Lenders signatory thereto (incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K dated May 7, 2015, File No. 001-35419).	Previously Filed
Exhibit 10.43	Amendment No. 1 to Amended and Restated Credit Agreement, dated as of May 6, 2015, by and among Kaman Corporation, RWG Germany GmbH, Kaman Composites - UK Holdings Limited and the other subsidiary borrowers from time to time party thereto, the Lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, and SunTrust Bank, KeyBank National Association, TD Bank, N.A., Branch Banking and Trust Company and Fifth Third Bank, as Co-Documentation agents (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated May 12, 2017, File No.001-35419).	Previously Filed
Exhibit 10.44	Amendment No. 2 to Amended and Restated Credit Agreement, dated as of May 6, 2015, by and among Kaman Corporation, RWG Germany GmbH, Kaman Composites - UK Holdings Limited, Kaman Lux Holding, S.à r.l and the other subsidiary borrowers from time to time party thereto, the Lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. and Citizens Bank, N.A., as Co-Syndication Agents, and SunTrust Bank, KeyBank National Association, TD Bank, N.A., Branch Banking and Trust Company and Fifth Third Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated December 15, 2017, File No. 001-35419).	Previously Filed
Exhibit 10.45	Amendment No. 3 to Amended and Restated Credit Agreement, dated as of May 6, 2015, by and among Kaman Corporation, RWG Germany GmbH, Kaman Composites - UK Holdings Limited, Kaman Lux Holding, S.à r.l and the other subsidiary borrowers from time to time party thereto, the Lenders from time to time party thereto, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. and Citizens Bank, N.A., as Co-Syndication Agents, and SunTrust Bank, KeyBank National Association, TD Bank, N.A., Branch Banking and Trust Company and Fifth Third Bank, as Co-Documentation Agents (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated February 16, 2018, File No. 001-35419).	Previously Filed

Exhibit 21	List of Subsidiaries	Filed Herewith
Exhibit 23	Consent of PricewaterhouseCoopers LLP, the Company's current independent registered public accounting firm.	Filed Herewith
Exhibit 24	Power of attorney under which this report was signed on behalf of certain directors	Filed Herewith

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Exhibit 31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14 under the Securities and Exchange Act of 1934.	Filed Herewith
Exhibit 31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14 under the Securities and Exchange Act of 1934.	Filed Herewith
Exhibit 32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Filed Herewith
Exhibit 32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	Filed Herewith
101.INS	XBRL Instance Document	Filed Herewith
101.SCH	XBRL Taxonomy Extension Schema	Filed Herewith
101.CAL	XBRL Taxonomy Extension Calculation Linkbase	Filed Herewith
101.DEF	XBRL Taxonomy Extension Definition Linkbase	Filed Herewith
101.LAB	XBRL Taxonomy Extension Label Linkbase	Filed Herewith
101.PRE	XBRL Taxonomy Extension Presentation Linkbase	Filed Herewith

* Management contract or compensatory plan