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

FORM 10-K

☒ **Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2017
OR

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from to
Commission file number 033-90866

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	**25-1615902**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**
1001 Air Brake Avenue Wilmerding, Pennsylvania 15148	**(412) 825-1000**
(Address of principal executive offices, including zip code)	**(Registrant's telephone number)**

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

Title of Class	Name of Exchange on which registered
Common Stock, par value $.01 per share	**New York Stock Exchange**

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

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

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

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

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

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

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

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

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

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

The registrant estimates that as of June 30, 2017, the aggregate market value of the voting shares held by non-affiliates of the registrant was approximately $7.8 billion based on the closing price on the New York Stock Exchange for such stock.

As of February 16, 2018, 96,090,518 shares of Common Stock of the registrant were issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the Proxy Statement for the registrant's Annual Meeting of Stockholders to be held on May 7, 2018 are incorporated by reference into Part III of this Form 10-K.

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PART I

Item 1. BUSINESS

General

Westinghouse Air Brake Technologies Corporation, doing business as Wabtec Corporation, is a Delaware corporation with headquarters at 1001 Air Brake Avenue in Wilmerding, Pennsylvania. Our telephone number is 412-825-1000, and our website is located at *www.wabtec.com*. All references to "we", "our", "us", the "Company" and "Wabtec" refer to Westinghouse Air Brake Technologies Corporation and its consolidated subsidiaries. George Westinghouse founded the original Westinghouse Air Brake Co. in 1869 when he invented the air brake. Westinghouse Air Brake Company ("WABCO") was formed in 1990 when it acquired certain assets and operations from American Standard, Inc., now known as Trane ("Trane"). The company went public on the New York Stock Exchange in 1995. In 1999, WABCO merged with MotivePower Industries, Inc. and adopted the name Wabtec.

In 2017, Wabtec completed the acquisition of Faiveley Transport, S.A. ("Faiveley Transport"), a leading provider of value-added, integrated systems and services, primarily for the global transit rail market, for a purchase price of approximately $1.5 billion. Based in France, Faiveley Transport has roots to 1919 and became a leader in manufacturing pantographs, automatic door mechanisms and air conditioning systems. Faiveley Transport was listed on the Paris Stock Exchange in 1994 and during the next 20 years acquired a number of rail industry leaders including Sab Wabco, a specialist in railway braking systems and couplers. Wabtec believes that the acquisition of Faiveley Transport provides the following strategic benefits:

- *Increased diversity of revenues by product, geography and market.* A majority of Faiveley Transport's revenues are outside the U.S. and in the transit market, which helps to balance the cyclicality of our North American freight business.
- *Broadened product line.* Faiveley Transport provides many products that we did not previously offer, including braking and door systems for high-speed trains and air conditioning systems.
- *Expanded international presence in the transit market.* A majority of Faiveley Transport's revenues come from transit markets outside the U.S., where we previously did not have a strong presence.
- *Increased technical and engineering expertise.* Faiveley Transport strengthens Wabtec's technical capabilities and product development efforts.

Today, we are one of the world's largest providers of value-added, technology-based equipment, systems and services for the global passenger transit and freight rail industries. We believe we hold a leading market share for many of our core product lines globally. Our highly engineered products, which are intended to enhance safety, improve productivity and reduce maintenance costs for customers, can be found on most locomotives, freight cars, passenger transit cars and buses around the world. In 2017, the Company had sales of approximately $3.9 billion and net income attributable to our shareholders of about $262.3 million. In 2017, sales of aftermarket parts and services represented about 56% of total sales, while sales to customers outside of the U.S. accounted for about 66% of total sales.

Industry Overview

The Company primarily serves the global passenger transit and freight rail industries. As such, our operating results are largely dependent on the level of activity, financial condition and capital spending plans of passenger transit agencies and freight railroads around the world, and transportation equipment manufacturers who serve those markets. Many factors influence these industries, including general economic conditions; traffic volumes, as measured by freight carloadings and passenger ridership; government spending on public transportation; and investment in new technologies. In general, trends such as increasing urbanization and growth in developing markets, a focus on sustainability and environmental awareness, increasing investment in technology solutions, an aging equipment fleet, and growth in global trade are expected to drive continued investment in passenger transit and freight rail.

According to the 2016 bi-annual edition of a market study by UNIFE, the Association of the European Rail Industry, the accessible global market for railway products and services was more than $100 billion, and was expected to grow at about 3.2% annually through 2021. The three largest geographic markets, which represented about 80% of the total accessible market, were Europe, North America and Asia Pacific. UNIFE projected above-average growth in Asia Pacific and Europe due to overall economic growth and trends such as urbanization and increasing mobility, deregulation, investments in new technologies, energy and environmental issues, and increasing government support. The largest product segments of the market were rolling stock, services and infrastructure, which represent almost 90% of the accessible market. UNIFE projected spending on rolling stock to grow at an above-average rate due to increased investment in passenger transit vehicles. UNIFE estimated that the global installed base of locomotives was about 114,000 units, with about 32% in Asia Pacific, about 25% in North America and about 18% in Russia-CIS (Commonwealth of Independent States). Wabtec estimates that about 2,600 new locomotives were delivered worldwide in 2017, and we expect deliveries of about 2,700 in 2018. UNIFE estimated the global installed base of freight cars was about 5.5 million units, with about 37% in North America, about 26% in Russia-CIS and about 20% in Asia Pacific. Wabtec estimates that about 155,000 new freight cars were delivered worldwide in 2017, and it expects deliveries of about 148,000 in 2018. UNIFE estimated the global installed base of passenger transit vehicles to be about 569,000 units, with about 43% in Asia Pacific, about 32% in Europe and about 14% in Russia-CIS. Wabtec estimates that about 34,000 new passenger transit vehicles were delivered worldwide in 2017, and we expect deliveries of about 44,000 in 2018.

In Europe, the majority of the rail system serves the passenger transit market, which is expected to continue growing as energy and environmental factors encourage continued investment in public mass transit. According to UNIFE, France, Germany and the United Kingdom were the largest Western European transit markets, representing almost two-thirds of industry spending in the European Union. UNIFE projected the Western European rail market to grow at about 3.6% annually, led by investments in new rolling stock in France and Germany. Significant investments were also expected in Turkey, the largest market in Eastern Europe. About 75% of freight traffic in Europe is hauled by truck, while rail accounts for about 20%. The largest freight markets in Europe are Germany, Poland and the United Kingdom. In recent years, the European Commission has adopted a series of measures designed to increase the efficiency of the European rail network by standardizing operating rules and certification requirements. UNIFE believes that adoption of these measures should have a positive effect on ridership and investment in public transportation over time.

In North America, railroads carry about 40% of intercity freight, as measured by ton-miles, which is more than any other mode of transportation. Through direct ownership and operating partnerships, U.S. railroads are part of an integrated network that includes railroads in Canada and Mexico, forming what is regarded as the world's most-efficient and lowest-cost freight rail service. There are more than 500 railroads operating in North America, with the largest railroads, referred to as "Class I," accounting for more than 90% of the industry's revenues. The railroads carry a wide variety of commodities and goods, including coal, metals, minerals, chemicals, grain, and petroleum. These commodities represent about 50% of total rail carloadings, with intermodal carloads accounting for the rest. Railroads operate in a competitive environment, especially with the trucking industry, and are always seeking ways to improve safety, cost and reliability. New technologies offered by Wabtec and others in the industry can provide some of these benefits. Demand for our freight related products and services in North America is driven by a number of factors, including rail traffic, and production of new locomotives and new freight cars. In the U.S., the passenger transit industry is dependent largely on funding from federal, state and local governments, and from fare box revenues. Demand for North American passenger transit products is driven by a number of factors, including government funding, deliveries of new subway cars and buses, and ridership. The U.S. federal government provides money to local transit authorities, primarily to fund the purchase of new equipment and infrastructure for their transit systems.

Growth in the Asia Pacific market has been driven mainly by the continued urbanization of China and India, and by investments in freight rail rolling stock and infrastructure in Australia to serve its mining and natural resources markets. India is making significant investments in rolling stock and infrastructure to modernize its rail system; for example, the country has awarded a 1,000-unit locomotive order to a U.S. manufacturer. UNIFE expected the increased spending in India to offset decreased spending on very-high-speed rolling stock in China.

Other key geographic markets include Russia-CIS and Africa-Middle East. With about 1.4 million freight cars and about 20,000 locomotives, Russia-CIS is among the largest freight rail markets in the world, and it's expected to invest in both freight and transit rolling stock. PRASA, the Passenger Rail Agency of South Africa, is expected to continue to invest in new transit cars and new locomotives. According to UNIFE, emerging markets were expected to grow at above-average rates as global trade led to increased freight volumes and urbanization led to increased demand for efficient mass-transportation systems. As this growth occurs, Wabtec expects to have additional opportunities to provide products and services in these markets.

In its study, UNIFE also said it expected increased investment in digital tools for data and asset management, and in rail control technologies, both of which would improve efficiency in the global rail industry. UNIFE said data-driven asset management tools have the potential to reduce equipment maintenance costs and improve asset utilization, while rail control technologies have been focused on increasing track capacity, improving operational efficiency and ensuring safer railway traffic. Wabtec offers products and services to help customers make ongoing investments in these initiatives.

Business Segments and Products

We provide our products and services through two principal business segments, the Transit Segment and the Freight Segment, both of which have different market characteristics and business drivers. The acquisition of Faiveley Transport significantly strengthened our capabilities and presence in the worldwide transit market.

The Transit Segment, primarily manufactures and services components for new and existing passenger transit vehicles, typically regional trains, high speed trains, subway cars, light-rail vehicles and buses; supplies rail control and infrastructure products including electronics, positive train control equipment, and signal design and engineering services; builds new commuter locomotives; and refurbishes passenger transit vehicles. Customers include public transit authorities and municipalities, leasing companies, and manufacturers of passenger transit vehicles and buses around the world. Demand in the transit market is primarily driven by general economic conditions, passenger ridership levels, government spending on public transportation, and investment in new rolling stock. In 2017, the Transit Segment accounted for 64% of our total sales, with about 21% of its sales in the U.S. About two-thirds of the Transit Segment's sales are in the aftermarket with the remainder in the original equipment market. The addition of Faiveley Transport's key products strengthened Wabtec's presence in the following areas: high-speed braking and door systems; heating, ventilation and air conditioning systems; pantographs and power collection; information systems; platform screen doors and gates; couplers; and aftermarket services, maintenance and spare parts. Geographically, Faiveley Transport significantly strengthened Wabtec's presence in the European and Asia Pacific transit markets.

The Freight Segment primarily manufactures and services components for new and existing locomotives and freight cars; supplies rail control and infrastructure products including electronics, positive train control equipment, and signal design and engineering services; overhauls locomotives; and provides heat exchangers and cooling systems for rail and other industrial markets. Customers include large, publicly traded railroads, leasing companies, manufacturers of original equipment such as locomotives and freight cars, and utilities. Demand is primarily driven by general economic conditions and industrial activity; traffic volumes, as measured by freight carloadings; investment in new technologies; and deliveries of new locomotives and freight cars. In 2017, the Freight Segment accounted for 36% of our total sales, with about 58% of its sales in the U.S. In 2017, slightly more than half of the Freight Segment's sales were in the aftermarket.

Following is a summary of our leading product lines in both aftermarket and original equipment across both of our business segments:

Specialty Products & Electronics:

- Positive Train Control equipment and electronically controlled pneumatic braking products
- Railway electronics, including event recorders, monitoring equipment and end of train devices
- Signal design and engineering services
- Freight car trucks and couplers
- Draft gears, couplers and slack adjusters
- Air compressors and dryers
- Heat exchangers and cooling products for locomotives and power generation equipment
- Track and switch products

Brake Products:

- Railway braking equipment and related components for Freight and Transit applications, including high-speed passenger transit vehicles
- Friction products, including brake shoes, discs and pads

Remanufacturing, Overhaul and Build:

- New commuter and switcher locomotives
- Transit car and locomotive overhaul and refurbishment

Transit Products:

- Heating, ventilation and air conditioning equipment
- Doors for buses and subway cars
- Platform screen doors
- Pantographs
- Window assemblies
- Couplers
- Accessibility lifts and ramps for buses and subway cars
- Traction motors

We have become a leader in the passenger transit and freight rail industries by capitalizing on the strength of our existing products, technological capabilities and new product innovations, and by our ability to harden products to protect them from severe conditions, including extreme temperatures and high-vibration environments. Supported by our technical staff of over 2,300 engineers and specialists, we have extensive experience in a broad range of product lines, which enables us to provide comprehensive, systems-based solutions for our customers.

In recent years, we have introduced a number of significant new products, including Positive Train Control ("PTC") equipment that encompasses onboard digital data and global positioning communication protocols. We are making additional investments in this technology which we believe will provide customers with opportunities to improve safety and efficiency, in part through data analytics solutions. Other new products include HVAC inverter integrated solutions, brake discs and brake controls, platform doors and gates, and door controllers.

For additional information on our business segments, see Note 20 of "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report.

Competitive Strengths

Our key strengths include:

- *Leading market positions in core products*. Dating back to 1869 and George Westinghouse's invention of the air brake, we are an established leader in the development and manufacture of pneumatic braking equipment for freight and passenger transit vehicles. Faiveley Transport, founded nearly 100 years ago, has a long history and is a market leader for its core products, including pantographs, automatic door mechanisms and air conditioning systems. We have leveraged our leading positions by focusing on research and engineering to expand beyond pneumatic braking components to supplying integrated parts and assemblies for the locomotive through the end of the train. We are a recognized leader in the development and production of electronic recording, measuring and communications systems, positive train control equipment, highly engineered compressors and heat exchangers for locomotives, and a leading manufacturer of freight car components, including electronic braking equipment, draft gears, trucks, brake shoes and electronic end-of-train devices. We are also a leading provider of braking equipment; heating, ventilation and air conditioning equipment; door assemblies and platform screen doors; lifts and ramps; couplers and current collection equipment, such as pantographs, for passenger transit vehicles.
- *Breadth of product offering with a stable mix of original equipment market (OEM) and aftermarket business*. Our product portfolio is one of the broadest in the rail industry, as we offer a wide selection of quality parts, components and assemblies across the entire train and worldwide. We provide our products in both the original equipment market and the aftermarket. Our substantial installed base of products with end-users such as the railroads and the passenger transit authorities is a significant competitive advantage for providing products and services to the aftermarket because these customers often look to purchase safety- and performance-related replacement parts from the original equipment components supplier. In addition, as OEMs and railroad operators attempt to modernize fleets with new products designed to improve and maintain safety and efficiency, these products must be designed to be interoperable with existing equipment. On average, over the last several years, about 60% of our total net sales have come from our aftermarket products and services business.
- *Leading design and engineering capabilities*. We believe a hallmark of our relationship with our customers has been our leading design and engineering practice, which has, in our opinion, assisted in the improvement and modernization of global railway equipment. We believe both our customers and the government authorities value our technological capabilities and commitment to innovation, as we seek not only to enhance the efficiency and profitability of our customers, but also to improve the overall safety of the railways through continuous improvement of product performance. The Company has an established record of product improvements and new product development. We have assembled a wide range of patented products, which we believe provides us with a competitive advantage. Wabtec currently owns 3,135 active patents worldwide. During the last three years, we have filed for approximately 450 patents worldwide in support of our new and evolving product lines.
- *Experience with industry regulatory requirements.* The freight rail and passenger transit industries are governed by various government agencies and regulators in each country and region. These groups mandate rigorous manufacturer certification, new product testing and approval processes that we believe are difficult for new entrants to meet cost-effectively and efficiently without the scale and extensive experience we possess. Certification processes are lengthy, and often require local presence and expertise. In addition, each transit agency places a high degree of importance on vehicle customization, which requires experience and technical expertise to meet ever-evolving specifications.
- *Experienced management team and the Wabtec Excellence Program (WEP)* Wabtec's lean manufacturing and continuous improvement initiatives have been a part of the Company's culture for more than 25 years and have enabled Wabtec to manage successfully through cycles in the rail supply market. With the acquisition of Faiveley Transport

(see Note 3 of "Notes to Consolidated Financial Statements" for further details), which introduced its Worldwide Excellence Program several years ago, we have combined the best practices of both organizations into WEP. We expect WEP will not only drive a successful integration of Wabtec and Faiveley Transport, but will also result in a reduced cost structure and ensure standardized excellence in all processes. We believe that using WEP as our operational foundation will foster state-of-the-art processes and continuous improvement, promote a constant pursuit of quality, and drive practical innovations and best-in-class, modern manufacturing.

Business strategy

Using WEP, we strive to generate sufficient cash to invest in our growth strategies and to build on what we consider to be a leading position as a low-cost producer in the industry while maintaining world-class product quality, technology and customer responsiveness. Through WEP and employee-directed initiatives such as Kaizen, a Japanese-developed team concept, we continuously strive to improve quality, delivery and productivity, and to reduce costs utilizing global sourcing and supply chain management. These practices enable us to streamline processes, improve product reliability and customer satisfaction, reduce product cycle times and respond more rapidly to market developments. We also rely on functional experts within the company across various disciplines to train, coach and share best practices throughout the corporation, while benchmarking against best-in-class competitors and peers. Over time, we believe the principles of WEP will enable us to continue to increase operating margins, improve cash flow and strengthen our ability to invest in the following growth strategies:

- *Product innovation and new technologies*. We continue to emphasize innovation and development funding to create new products and capabilities, such as vehicle monitoring and data analytics. WabtecONE is a multi-year initiative to ensure that we continue to build on our existing expertise and technologies in electronics. In addition, we invest in developing enhancements and new features to existing products, such as brake discs and heat exchangers. We are focusing on technological advances, especially in the areas of electronics, braking products and other on-board equipment, as a means to deliver new product growth. We seek to provide customers with incremental technological advances that offer immediate benefits with cost-effective investments.
- *Global and market expansion*. We believe that international markets represent a significant opportunity for future growth. In 2017, sales to non-U.S. customers were approximately $2.6 billion. We intend to increase international sales through direct sales of existing products to current and new customers, by developing specific new products for application in new geographic markets, by making strategic acquisitions and through joint ventures with railway suppliers which have a strong presence in their local markets. In transit, we are focused on mature markets such as Europe and emerging markets such as India. In freight, we are targeting markets that operate significant fleets of U.S.-style locomotives and freight cars, including Australia, Brazil, China, India, Russia, South Africa, and other select areas within Europe and South America. In addition, we have opportunities to increase the sale of certain products that we currently manufacture for the rail industry into other industrial markets, such as mining, off-highway and energy. These products include heat exchangers and friction materials.
- *Aftermarket products and services*. Historically, aftermarket sales are less cyclical than OEM sales because a certain level of aftermarket maintenance and service work must be performed, even during an industry slowdown. In 2017, Wabtec's aftermarket sales and services represented approximately 56% of the Company's total sales across both of our business segments. As a long time supplier of original equipment, we have an extensive installed base of equipment in the field, which generates recurring aftermarket sales. Wabtec provides aftermarket parts and services for its components, and we seek to expand this business with customers who currently perform the work in-house. In this way, we expect to benefit as transit authorities and railroads outsource certain maintenance and overhaul functions.
- *Acquisitions, joint ventures and alliances*. We invest in acquisitions, joint ventures and alliances using a disciplined, selective approach and rigorous financial criteria. These transactions are expected to meet our financial criteria and contribute to growth strategies of product innovation and new technologies, global expansion, and aftermarket products and services. We believe these expansion strategies will help Wabtec to grow profitably, expand geographically, and dampen the impact from potential cycles in the North American freight rail industry.

Recent Acquisitions and Joint Ventures

See Note 3 of the Notes to Consolidated Financial Statements

Backlog

The Company's backlog was about $4.6 billion at December 31, 2017. For 2017, about 56% of total sales came from aftermarket orders, which typically carry lead times of less than 30 days, and are not recorded in backlog for a significant period of time.

The Company's contracts are subject to standard industry cancellation provisions, including cancellations on short notice or upon completion of designated stages. Generally, if a customer were to cancel a contract we would have an enforceable right to payment for work completed up to the date of cancellation which would include a reasonable profit margin. Substantial scope-of-work adjustments are common. For these and other reasons, completion of the Company's backlog may be delayed or canceled. The railroad industry, in general, has historically been subject to fluctuations due to overall economic conditions and the level of use of alternative modes of transportation.

The backlog of firm customer orders as of December 31, 2017 and December 31, 2016, and the expected year of completion are as follows:

In thousands	Total Backlog 12/31/2017	Expected Delivery 2018	Expected Delivery Other Years	Total Backlog 12/31/2016	Expected Delivery 2017	Expected Delivery Other Years
Freight Segment	$ 549,188	$ 423,805	$ 125,383	$ 575,931	$ 396,160	$ 179,771
Transit Segment	4,050,460	1,891,079	2,159,381	3,405,561	1,565,519	1,840,042
Total	$ 4,599,648	$ 2,314,884	$ 2,284,764	$ 3,981,492	$ 1,961,679	$ 2,019,813

Engineering and Development

To execute our strategy to develop new products, we invest in a variety of engineering and development activities. For the fiscal years ended December 31, 2017, 2016, and 2015, we invested about $95.2 million, $71.4 million and $71.2 million, respectively, on product development and improvement activities. The engineering resources of the Company are allocated between research and development activities and the execution of original equipment customer contracts. Across the corporation we have established multiple Centers of Competence, which have specialized, technical expertise in various disciplines and product areas.

Our engineering and development program includes investments in data analytics, train control and other new technologies, with an emphasis on developing products that enhance safety, productivity and efficiency for our customers. For example, we have developed advanced cooling systems that enable lower emissions from diesel engines used in rail and other industrial markets. Sometimes we conduct specific research projects in conjunction with universities, customers and other industry suppliers.

We use our Product Development System to develop and monitor new product programs. The system requires the product development team to follow consistent steps throughout the development process, from concept to launch, to ensure the product will meet customer expectations and internal profitability targets.

Positive Train Control ("PTC")

PTC is a collision-avoidance system that uses GPS to monitor and control the movement of passenger and freight trains. In 2008, the U.S. mandated the use of PTC on a majority of the locomotives and track in the U.S. The Federal Railroad Administration ("FRA") eventually approved the use of Wabtec's Electronic Train Management System® as the on-board locomotive standard for the deployment of this technology. Our system includes an on-board locomotive computer and related software. The deadline to implement this technology is December 31, 2018, and we are working with the U.S. Class I railroads, commuter rail authorities and other industry suppliers to meet this deadline. Under certain conditions, the deadline could be extended through 2019 and 2020. In 2017, Wabtec recorded about $322 million of revenue from freight and transit train control and signaling projects, which includes PTC.

Intellectual Property

We have 3,135 active patents worldwide and on average file for approximately 150 new patents each year. We also rely on a combination of trade secrets and other intellectual property laws, nondisclosure agreements and other protective measures to establish and protect our proprietary rights in our intellectual property. We also follow the product development practices of our competitors to monitor any possible patent infringement by them, and to evaluate their strategies and plans.

Certain trademarks, among them the name WABCO®, were acquired or licensed from American Standard Inc., now known as Trane, in 1990 at the time of our acquisition of the North American operations of the Railway Products Group of Trane. Other trademarks have been developed through the normal course of business, or acquired as a part of our ongoing merger and acquisition program.

We have entered into a variety of license agreements as licensor and licensee. We do not believe that any single license agreement is of material importance to our business or either of our business segments as a whole.

We have issued licenses to the two sole suppliers of railway air brakes and related products in Japan, Nabtesco and Mitsubishi Electric Company. The licensees pay annual license fees to us and also assist us by acting as liaisons with key Japanese passenger transit vehicle builders for projects in North America. We believe that our relationships with these licensees are beneficial to our core transit business and customer relationships in North America.

Customers

We provide products and services for more than 500 customers worldwide. Our customers include passenger transit authorities and railroads throughout North America, Europe, Asia Pacific, South Africa and South America; manufacturers of transportation equipment, such as locomotives, freight cars, passenger transit vehicles and buses; and companies that lease and maintain such equipment.

Top customers can change from year to year. For the fiscal year ended December 31, 2017, our top five customers accounted for approximately 18% of net sales: Bombardier, Inc., Alstom, the Greenbrier Companies, Siemens and Union Pacific Corporation. No one customer represents 10% or more of consolidated sales. We believe that we have strong relationships with all of our key customers.

Competition

We believe we hold a leading market share for many of our core product lines globally, although market shares vary by product lines and geographies. We operate in a highly competitive marketplace. Price competition is strong because we have a relatively small number of customers and they are very cost-conscious. In addition to price, competition is based on product performance and technological leadership, quality, reliability of delivery, and customer service and support.

Our principal competitors vary across product lines and geographies. Within North America, New York Air Brake Company, a subsidiary of the German air brake producer Knorr-Bremse AG ("Knorr") and Amsted Rail Company, Inc., a subsidiary of Amsted Industries Corporation, are our principal overall OEM competitors. Our competition for locomotive, freight and passenger transit service and repair is mostly from the railroads' and passenger transit authorities' in-house operations, Electro-Motive Diesel, a division of Caterpillar, GE Transportation Systems, and New York Air Brake/Knorr. We believe our key strengths, which include leading market positions in core products, breadth of product offering with a stable mix of OEM and aftermarket business, leading design and engineering capabilities, significant barriers to entry and an experienced management team, enable us to compete effectively in this marketplace. Outside of North America, Knorr is our main competitor, although not in every product line or geography. In addition, our competitors often include smaller, local suppliers in most international markets. Depending on the product line and geography, we can also compete with our customers, such as CRRC Corporation Limited, a China-based manufacturer of rolling stock.

Employees

At December 31, 2017, we employed approximately 18,000 full-time employees around the world. This figure includes employees subject to collective bargaining agreements, most of which are outside of North America. We consider our relations with employees and union representatives to be good, but cannot assure that future contract negotiations and labor relations will be favorable to us.

Regulation

In the course of our operations, we are subject to various regulations and standards of governments and other agencies in the U.S. and around the world. These entities typically govern equipment, safety and interoperability standards for passenger transit and freight rail rolling stock, oversee a wide variety of rules and regulations governing safety and design of equipment, and evaluate certification and qualification requirements for suppliers. New products generally must undergo testing and approval processes that are rigorous and lengthy. As a result of these regulations and requirements, we must usually obtain and maintain certifications in a variety of jurisdictions and countries. The governing bodies include the FRA and the Association of American Railroads ("AAR") in the U.S., and the International Union of Railways ("UIC") and the European Railway Agencies in Europe. Also in Europe, the European Committees for Standardization continually draft new European standards which cover, for example, the Reliability, Availability, Maintainability and Safety of railways systems. To guarantee interoperability in Europe, the European Union for Railway Agencies is responsible for defining and implementing Technical Standards of Interoperability, which covers areas such as infrastructure, energy, rolling stock, telematic applications, traffic operation and management subsystems, noise pollution and waste generation, protection against fire and smoke, and system safety.

Most countries and regions in which Wabtec does business have similar rule-making bodies. In Russia, a GOST-R certificate of conformity is mandatory for all products related to the safety of individuals on Russian territory. In China, any product or system sold on the Chinese market must have been certified in accordance with national standards. In the local Indian market, most products are covered by regulations patterned after AAR and UIC standards.

Effects of Seasonality

Our business is not typically seasonal. The third quarter results may be affected by vacation and scheduled plant shutdowns at several of our major customers and fourth quarter results may be affected by the timing of spare parts and service orders placed by transit agencies worldwide. Quarterly results can also be affected by the timing of projects in backlog and by project delays.

Environmental Matters

Additional information on environmental matters is included in Note 19 of "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report.

Available Information

We maintain a website at *www.wabtec.com*. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to such reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as well as the annual report to stockholders and other information, are available free of charge on this site. The Internet site and the information contained therein or connected thereto are not incorporated by reference into this Form 10-K. The following are also available free of charge on this site and are available in print to any shareholder who requests them: Our Corporate Governance Guidelines, the charters of our Audit, Compensation and Nominating and Corporate Governance Committees, our Code of Conduct, which is applicable to all employees, our Code of Ethics for Senior Officers, which is applicable to our executive officers, our Policies on Related Party Transactions and Conflict Minerals, and our Sustainability Report.

Item 1A. RISK FACTORS

Prolonged unfavorable economic and market conditions could adversely affect our business.

Unfavorable general economic and market conditions in the United States and internationally could have a negative impact on our sales and operations. To the extent that these factors result in continued instability of capital markets, shortages of raw materials or component parts, longer sales cycles, deferral or delay of customer orders or an inability to market our products effectively, our business and results of operations could be materially adversely affected.

We are dependent upon key customers.

We rely on several key customers who represent a significant portion of our business. Our top customers can change from year to year. For the fiscal year ended December 31, 2017, our top five customers accounted for approximately 18% of our net sales. While we believe our relationships with our customers are generally good, our top customers could choose to reduce or terminate their relationships with us. In addition, many of our customers place orders for products on an as-needed basis and operate in cyclical industries. As a result, their order levels have varied from period to period in the past and may vary significantly in the future. Such customer orders are dependent upon their markets and customers, and may be subject to delays and cancellations. As a result of our dependence on our key customers, we could experience a material adverse effect on our business, results of operations and financial condition if we lost any one or more of our key customers or if there is a reduction in their demand for our products.

Our business operates in a highly competitive industry.

We operate in a global, competitive marketplace and face substantial competition from a limited number of established competitors, some of which may have greater financial resources than we do. Price competition is strong and, coupled with the existence of a number of cost conscious customers, has historically limited our ability to increase prices. In addition to price, competition is based on product performance and technological leadership, quality, reliability of delivery and customer service and support. There can be no assurance that competition in one or more of our markets will not adversely affect us and our results of operations.

We intend to pursue acquisitions, joint ventures and alliances that involve a number of inherent risks, any of which may cause us not to realize anticipated benefits.

One aspect of our business strategy is to selectively pursue acquisitions, joint ventures and alliances that we believe will improve our market position, and provide opportunities to realize operating synergies. These transactions involve inherent risks and uncertainties, any one of which could have a material adverse effect on our business, results of operations and financial condition including:

- difficulties in achieving identified financial and operating synergies, including the integration of operations, services and products;
- diversion of management's attention from other business concerns;
- the assumption of unknown liabilities; and
- unanticipated changes in the market conditions, business and economic factors affecting such an acquisition.

We cannot assure that we will be able to consummate any future acquisitions, joint ventures or other business combinations. If we are unable to identify suitable acquisition candidates or to consummate strategic acquisitions, we may be unable to fully implement our business strategy, and our business and results of operations may be adversely affected as a result. In addition, our ability to engage in strategic acquisitions will be dependent on our ability to raise substantial capital, and we may not be able to raise the funds necessary to implement our acquisition strategy on terms satisfactory to us, if at all.

As we introduce new products and services, a failure to predict and react to customer demand could adversely affect our business.

We have dedicated significant resources to the development, manufacturing and marketing of new products. Decisions to develop and market new transportation products are typically made without firm indications of customer acceptance. Moreover, by their nature, new products may require alteration of existing business methods or threaten to displace existing equipment in which our customers may have a substantial capital investment. There can be no assurance that any new products that we develop will gain widespread acceptance in the marketplace or that such products will be able to compete successfully with other new products or services that may be introduced by competitors. In addition, we may incur additional warranty or other costs as new products are tested and used by customers.

A portion of our sales are related to delivering products and services to help our U.S. railroad and transit customers meet the Positive Train Control (PTC) mandate from the U.S. federal government, which requires the use of on-board locomotive computers and software by the end of 2018.

For the year ended December 31, 2017, we had sales of about $322 million related to Train Control and Signaling, which includes PTC. In 2015, the industry's PTC deadline was extended by three years through December 31, 2018, which also included the ability of railroads to request an additional two years for compliance with the approval of the Department of Transportation if certain parameters are met. This could change the timing of our revenues and could cause us to reassess the staffing, resources and assets deployed in delivering Positive Train Control services.

Our revenues are subject to cyclical variations in the railway and passenger transit markets and changes in government spending.

The railway industry historically has been subject to significant fluctuations due to overall economic conditions, the use of alternate methods of transportation and the levels of government spending on railway projects. In economic downturns, railroads have deferred, and may defer, certain expenditures in order to conserve cash in the short term. Reductions in freight traffic may reduce demand for our replacement products.

The passenger transit railroad industry is also cyclical. New passenger transit car orders vary from year to year and are influenced greatly by major replacement programs and by the construction or expansion of transit systems by transit authorities. To the extent that future funding for proposed public projects is curtailed or withdrawn altogether as a result of changes in political, economic, fiscal or other conditions beyond our control, such projects may be delayed or cancelled, resulting in a potential loss of business for us, including transit aftermarket and new transit car orders. There can be no assurance that economic conditions will be favorable or that there will not be significant fluctuations adversely affecting the industry as a whole and, as a result, us.

Our backlog is not necessarily indicative of the level of our future revenues.

Our backlog represents future production and estimated potential revenue attributable to firm contracts with, or written orders from, our customers for delivery in various periods. Instability in the global economy, negative conditions in the global credit markets, volatility in the industries that our products serve, changes in legislative policy, adverse changes in the financial condition of our customers, adverse changes in the availability of raw materials and supplies, or un-remedied contract breaches could possibly lead to contract termination or cancellations of orders in our backlog or request for deferred deliveries of our backlog orders, each of which could adversely affect our cash flows and results of operations.

A growing portion of our sales may be derived from our international operations, which exposes us to certain risks inherent in doing business on an international level.

In fiscal year 2017, approximately 66% of our consolidated net sales were to customers outside of the U.S. and we intend to continue to expand our international operations in the future. Our global headquarters for the Transit group is located in France, and we currently conduct other international operations through a variety of wholly and majority-owned subsidiaries and joint ventures in Australia, Austria, Brazil, Canada, China, Czech Republic, France, Germany, India, Italy, Macedonia, Mexico, the Netherlands, Poland, Russia, Spain, South Africa, Turkey, and the United Kingdom. As a result, we are subject to various risks, any one of which could have a material adverse effect on those operations and on our business as a whole, including:

- lack of complete operating control;
- lack of local business experience;
- currency exchange fluctuations and devaluations;
- foreign trade restrictions and exchange controls;
- difficulty enforcing agreements and intellectual property rights;
- the potential for nationalization of enterprises; and
- economic, political and social instability and possible terrorist attacks against American interests.

In addition, certain jurisdictions have laws that limit the ability of non-U.S. subsidiaries and their affiliates to pay dividends and repatriate cash flows.

We may have liability arising from asbestos litigation.

Claims have been filed against the Company and certain of its affiliates in various jurisdictions across the United States by persons alleging bodily injury as a result of exposure to asbestos-containing products. Most of these claims have been made against our wholly owned subsidiary, Railroad Friction Products Corporation (RFPC), and are based on a product sold by RFPC prior to the time that the Company acquired any interest in RFPC.

Most of these claims, including all of the RFPC claims, are submitted to insurance carriers for defense and indemnity or to non-affiliated companies that retain the liabilities for the asbestos-containing products at issue. We cannot, however, assure that all these claims will be fully covered by insurance or that the indemnitors or insurers will remain financially viable. Our ultimate legal and financial liability with respect to these claims, as is the case with most other pending litigation, cannot be estimated.

We are subject to a variety of environmental laws and regulations.

We are subject to a variety of environmental laws and regulations governing discharges to air and water, the handling, storage and disposal of hazardous or solid waste materials and the remediation of contamination associated with releases of hazardous substances. We believe our operations currently comply in all material respects with all of the various environmental laws and regulations applicable to our business; however, there can be no assurance that environmental requirements will not change in the future or that we will not incur significant costs to comply with such requirements.

Future climate change regulation could result in increased operating costs, affect the demand for our products or affect the ability of our critical suppliers to meet our needs.

The Company has followed the current debate over climate change and the related policy discussion and prospective legislation. The potential challenges for the Company that climate change policy and legislation may pose have been reviewed by the Company. Any such challenges are heavily dependent on the nature and degree of climate change legislation and the extent to which it applies to our industry. At this time, the Company cannot predict the ultimate impact of climate change and climate change legislation on the Company’s operations. Further, when or if these impacts may occur cannot be assessed until scientific analysis and legislative policy are more developed and specific legislative proposals begin to take shape. Any laws or regulations that may be adopted to restrict or reduce emissions of greenhouse gas could require us to incur increased operating costs, and could have an adverse effect on demand for our products. In addition, the price and availability of certain of the raw materials that we use could vary in the future as a result of environmental laws and regulations affecting our suppliers. An increase in the price of our raw materials or a decline in their availability could adversely affect our operating margins or result in reduced demand for our products.

The occurrence of litigation in which we could be named as a defendant is unpredictable.

From time to time, the Company is subject to litigation or other commercial disputes and other legal and regulatory proceedings with respect to our business, customers, suppliers, creditors, shareholders, product liability, intellectual property infringement, warranty claims or environmental-related matters. Due to the inherent uncertainties of any litigation, commercial disputes or other legal or regulatory proceedings, the Company cannot accurately predict their ultimate outcome, including the outcome of any related appeals. We may incur significant expense to defend or otherwise address current or future claims. Any litigation, even a claim without merit, could result in substantial costs and diversion of resources and could have a material adverse effect on our business and results of operations. Although we maintain insurance policies for certain risks, we cannot make assurances that this insurance will be adequate to protect us from all material judgments and expenses related to potential future claims or that these levels of insurance will be available in the future at economical prices or at all.

The Company is subject to national and international laws and regulations, such as the anti-corruption laws of the U.S. Foreign Corrupt Practices Act, the French Law n° 2016-1691 (Sapin II) and the U.K. Bribery Act, relating to its business and its employees. Despite the Company's policies, procedures and compliance programs, its internal controls and compliance systems may not be able to protect the Company from prohibited acts willfully committed by its employees, agents or business partners that would violate such applicable laws and regulations. Any such improper acts could damage the Company's reputation, subject it to civil or criminal judgments, fines or penalties, and could otherwise disrupt the Company's business, and as a result, could materially adversely impact the Company's business, financial condition or results of operations.

If we are not able to protect our intellectual property and other proprietary rights, we may be adversely affected.

Our success can be impacted by our ability to protect our intellectual property and other proprietary rights. We rely primarily on patents, trademarks, copyrights, trade secrets and unfair competition laws, as well as license agreements and other contractual provisions, to protect our intellectual property and other proprietary rights. However, a significant portion of our technology is not patented and we may be unable or may not seek to obtain patent protection for this technology. Moreover, existing U.S. legal standards relating to the validity, enforceability and scope of protection of intellectual property rights offer only limited protection, may not provide us with any competitive advantages and may be challenged by third parties. The laws of countries other than the United States may be even less protective of intellectual property rights. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our intellectual property or otherwise gaining access to our technology. If we fail to protect our intellectual property and other proprietary rights, then our business, results of operations or financial condition could be negatively impacted.

We face risks relating to cybersecurity attacks that could cause loss of confidential information and other business disruptions.

We rely extensively on computer systems to process transactions and manage our business, and our business is at risk from and may be impacted by cybersecurity attacks. These could include attempts to gain unauthorized access to our data and computer systems. Attacks can be both individual and/or highly organized attempts organized by very sophisticated hacking organizations. We employ a number of measures to prevent, detect and mitigate these threats, which include employee education, password encryption, frequent password change events, firewall detection systems, anti-virus software in-place and frequent backups; however, there is no guarantee such efforts will be successful in preventing a cyber-attack. A cybersecurity attack could compromise the confidential information of our employees, customers and supplier, and potentially violate certain domestic and international privacy laws. Furthermore, a cybersecurity attack on our customers and suppliers could compromise our confidential information in the possession of our customers and suppliers. A successful attack could disrupt and otherwise adversely affect our business operations, including through lawsuits by third-parties.

Our manufacturer's warranties or product liability may expose us to potentially significant claims.

We warrant the workmanship and materials of many of our products. Accordingly, we are subject to a risk of product liability or warranty claims in the event that the failure of any of our products results in personal injury or death, or does not conform to our customers' specifications. In addition, in recent years, we have introduced a number of new products for which we do not have a history of warranty experience. Although we currently maintain liability insurance coverage, we cannot assure that product liability claims, if made, would not exceed our insurance coverage limits or that insurance will continue to be available on commercially acceptable terms, if at all. The possibility exists for these types of warranty claims to result in costly product recalls, significant repair costs and damage to our reputation.

Labor disputes may have a material adverse effect on our operations and profitability.

We collectively bargain with labor unions at some of our operations throughout the world. Failure to reach an agreement could result in strikes or other labor protests which could disrupt our operations. Furthermore, non-union employees in certain countries have the right to strike. If we were to experience a strike or work stoppage, it would be difficult for us to find a sufficient number of employees with the necessary skills to replace these employees. We cannot assure that we will reach any such agreement or that we will not encounter strikes or other types of conflicts with the labor unions of our personnel. Such labor disputes could have an adverse effect on our business, financial condition or results of operations, could cause us to lose revenues and customers and might have permanent effects on our business.

We may incur increased costs due to fluctuations in interest rates and foreign currency exchange rates

In the ordinary course of business, we are exposed to increases in interest rates that may adversely affect funding costs associated with variable-rate debt and changes in foreign currency exchange rates. We may seek to minimize these risks through the use of interest rate swap contracts and currency hedging agreements. There can be no assurance that any of these measures will be effective. Material changes in interest or exchange rates could result in material losses to us.

Our indebtedness could adversely affect our financial health.

Being indebted could have important consequences to us. At December 31, 2017, we had total debt of $1,870.5 million. If it becomes necessary to access our available borrowing capacity under our 2016 Refinancing Credit Agreement, the $853.1 million currently borrowed under this facility and the $747.7 million 3.450% senior notes, and the $248.6 million 4.375% senior notes. For example, it could:

- increase our vulnerability to general adverse economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, acquisitions and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate;
- place us at a disadvantage compared to competitors that have less debt; and
- limit our ability to borrow additional funds.

The indenture for our $750 million 3.450% senior notes due in 2026, our $250 million 4.375% senior notes due in 2023, and our 2016 Refinancing Credit Agreement contain various covenants that limit our management's discretion in the operation of our businesses.

The 2016 Refinancing Credit Agreement limits the Company's ability to declare or pay cash dividends and prohibits the Company from declaring or making other distributions, subject to certain exceptions. The 2016 Refinancing Credit Agreement contains various other covenants and restrictions including the following limitations: incurrence of additional indebtedness; mergers, consolidations and sales of assets and acquisitions; additional liens; sale and leasebacks; permissible investments, loans and advances; certain debt payments; capital expenditures; and imposes a minimum interest expense coverage ratio and a maximum debt to EBITDA ratio. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" and see Note 8 of "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report.

The indentures under which the senior notes were issued contain covenants and restrictions which limit among other things, the following: the incurrence of indebtedness, payment of dividends and certain distributions, sale of assets, change in control, mergers and consolidations and the incurrence of liens.

The integration of our recently completed acquisitions may not result in anticipated improvements in market position or the realization of anticipated operating synergies or may take longer to realize than expected.

In 2016 and 2017, we completed multiple acquisitions with a combined investment of $1,865 million, which included our acquisition of Faiveley Transport for $1,507 million. Although we believe that the acquisitions will improve our market position and realize positive operating results, including operating synergies, operating expense reductions and overhead cost savings, we cannot be assured that these improvements will be obtained or the timing of such improvements. The management and acquisition of businesses involves substantial risks, any of which may result in a material adverse effect on our business and results of operations, including:

- the uncertainty that an acquired business will achieve anticipated operating results;
- significant expenses to integrate;
- diversion of Management's attention;
- departure of key personnel from the acquired business;
- effectively managing entrepreneurial spirit and decision-making;
- integration of different information systems;
- unanticipated costs and exposure to unforeseen liabilities; and
- impairment of assets.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

Facilities

The following table provides certain summary information about the principal facilities owned or leased by the Company as of December 31, 2017. The Company believes that its facilities and equipment are generally in good condition and that, together with scheduled capital improvements, they are adequate for its present and immediately projected needs. Leases on the facilities are long-term and generally include options to renew. The Company's corporate headquarters are located at the Wilmerding, PA site.

Location	Primary Use	Segment	Own/Lease	Approximate Square Feet	
Domestic					
Rothbury, MI	Manufacturing/Warehouse/Office	Freight	Own	500,000	
Wilmerding, PA	Manufacturing/Service	Freight	Own	365,000	(1)
Lexington, TN	Manufacturing	Freight	Own	170,000	
Jackson, TN	Manufacturing	Freight	Own	150,000	
Berwick, PA	Manufacturing/Warehouse	Freight	Own	150,000	
Chicago, IL	Manufacturing/Service	Freight	Own	123,000	
Greensburg, PA	Manufacturing	Freight	Own	113,000	
Chillicothe, OH	Manufacturing/Office	Freight	Own	104,000	
Warren, OH	Manufacturing	Freight	Own	103,000	
Delray Beach, FL	Warehouse	Freight	Lease	126,000	
Boise, ID	Manufacturing	Freight/Transit	Own	326,000	
Maxton, NC	Manufacturing	Freight/Transit	Own	105,000	
Salem, VA	Manufacturing	Transit	Own	320,000	
Greenville, SC	Manufacturing	Transit	Own	154,000	
Brenham, TX	Manufacturing/Office	Transit	Own	145,000	
Spartanburg, SC	Manufacturing/Service	Transit	Lease	184,000	
Carson City, NV	Manufacturing	Transit	Lease	176,000	
Buffalo Grove, IL	Manufacturing	Transit	Lease	116,000	
International					
Sao Paulo, Brazil	Manufacturing/Office	Freight	Own	177,000	
Wallaceburg (Ontario), Canada	Manufacturing	Freight	Own	126,000	
Northampton, UK	Manufacturing	Freight	Lease	300,000	
Shenyang City, Liaoning Province, China	Manufacturing	Freight	Lease	291,000	
Lincolnshire, UK	Manufacturing/Office	Freight	Lease	149,000	
London (Ontario), Canada	Manufacturing	Freight	Lease	104,000	
Doncaster, UK	Manufacturing/Service	Freight/Transit	Own	330,000	
Kilmarnock, UK	Manufacturing	Freight/Transit	Own	108,000	
Loughborough, UK	Manufacturing	Freight/Transit	Lease	245,000	
Kempton Park, South Africa	Manufacturing	Freight/Transit	Lease	156,000	
Piossasco, Italy	Manufacturing	Transit	Own	301,000	
Monte Alto, Brazil	Manufacturing/Office	Transit	Own	244,000	
Tamil Nadu, India	Manufacturing	Transit	Own	220,000	
Schkeuditz, Germany	Manufacturing	Transit	Own	219,000	

Location	Primary Use	Segment	Own/Lease	Approximate Square Feet
Schuttorf, Germany	Manufacturing/Office	Transit	Own	189,000
Amiens, France	Manufacturing	Transit	Own	142,000
Chard, UK	Manufacturing/Office	Transit	Own	142,000
St Pierre Des Corps, France	Manufacturing	Transit	Own	133,000
Avellino, Italy	Manufacturing/Office	Transit	Own	132,000
Burton on Trent, UK	Manufacturing/Office	Transit	Lease	253,000
Blovice, Czech Republic	Manufacturing	Transit	Lease	235,000
Witten, Germany	Manufacturing	Transit	Lease	209,000
Verviers, Belgium	Manufacturing/Office	Transit	Lease	137,000
Camisano, Italy	Manufacturing/Office	Transit	Lease	136,000
San Luis Potosi, Mexico	Manufacturing/Office	Transit	Lease	113,000
Birkenhead, UK	Overhaul/Manufacturing	Transit	Lease	109,000
Shanghai, China	Manufacturing	Transit	Lease	104,000

(1) Approximately 250,000 square feet are currently used in connection with the Company's corporate and manufacturing operations. The remainder is leased to third parties.

Item 3. LEGAL PROCEEDINGS

Additional information with respect to legal proceedings is included in Note 19 of "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report and incorporate by reference herein.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

The following table provides information on our executive officers as of December 31, 2017. They are elected periodically by our Board of Directors and serve at its discretion.

Officers	Age	Position
Albert J. Neupaver	67	Chairman of the Board
Raymond T. Betler	62	President and Chief Executive Officer
Stephane Rambaud-Measson	55	Executive Vice President, President and Chief Operating Officer
Patrick D. Dugan	51	Executive Vice President Finance, and Chief Financial Officer
R. Mark Cox	49	Executive Vice President, Corporate Development
David L. DeNinno	62	Executive Vice President, General Counsel and Secretary
Scott E. Wahlstrom	54	Executive Vice President, Human Resources
John A. Mastalerz	51	Senior Vice President of Finance, Corporate Controller and Principal Accounting Officer
Paul I. Overby	60	Vice President, Corporate Strategy
Timothy R. Wesley	56	Vice President, Investor Relations and Corporate Communications

Albert J. Neupaver was named Chairman of the Board of Directors in May 2017. Prior to that, Mr. Neupaver served as Executive Chairman of the Company since May 2014. Previously, he served as Chairman and CEO from May 2013 to May 2014 and as the Company's President and CEO from February 2006 to May 2013. Prior to joining Wabtec, Mr. Neupaver served in various positions at AMETEK, Inc., a leading global manufacturer of electronic instruments and electric motors. Most recently he served as President of its Electromechanical Group for nine years.

Raymond T. Betler was named President and Chief Executive Officer in May 2014. Previously, Mr. Betler was President and Chief Operating Officer since May 2013 and the Company's Chief Operating Officer since December 2010. Prior to that, he served as Vice President, Group Executive of the Company since August 2008. Prior to joining Wabtec, Mr. Betler served in various positions of increasing responsibility at Bombardier Transportation since 1979. Most recently, Mr. Betler served as President, Total Transit Systems from 2004 until 2008 and before that as President, London Underground Projects from 2002 to 2004.

Stephane Rambaud-Measson was named Executive Vice President and Chief Operating Officer in May 2017. Prior to that, Mr. Rambaud-Measson served as Executive Vice President, President and CEO, Transit Segment from December 2016. Previously, Mr. Rambaud-Measson was Chairman of the Management Board and Chief Executive Officer of Faiveley Transport from April 2014 until November 30, 2016. Prior to that position, he served as Executive Vice President of Faiveley Transport from March 2014 to April 2014. Prior to joining Faiveley Transport, Mr. Rambaud-Measson was Chief Executive Officer of Veolia Verkehr. Prior to that, Mr. Rambaud-Measson served in various management roles at Bombardier Transport including President of the Passengers Division beginning in 2008. Before that, in 2005, he was appointed President of Mainline & Metro after serving as Group Vice President Project Management and Administration, which he began in 2004.

Patrick D. Dugan was named Executive Vice President and Chief Financial Officer effective December 2016. Previously Mr. Dugan served as Senior Vice President and Chief Financial Officer since January 2014. Previously, Mr. Dugan was Senior Vice President, Finance and Corporate Controller from January 2012 until November 2013. He originally joined Wabtec in 2003 as Vice President, Corporate Controller. Prior to joining Wabtec, Mr. Dugan served as Vice President and Chief Financial Officer of CWI International, Inc. from December 1996 to November 2003. Prior to 1996, Mr. Dugan was a Manager with PricewaterhouseCoopers.

R. Mark Cox was named Executive Vice President, Corporate Development effective December 2016. Previously, Mr. Cox served as Sr. Vice President Corporate Development from January 2012, and has been with Wabtec since September 2006 as Vice President, Corporate Development. Prior to joining Wabtec, Mr. Cox served as Director of Business Development for the Electrical Group of Eaton Corporation since 2002. Prior to joining Eaton, Mr. Cox was an investment banker with UBS Warburg, Prudential and Stephens.

David L. DeNinno was named Executive Vice President, General Counsel and Secretary of the Company effective December 2016. Previously, Mr. DeNinno served as Sr. Vice President, General Counsel and Secretary since February 2012. Previously, Mr. DeNinno served as a partner at K&L Gates LLP since May 2011 and prior to that with Reed Smith LLP.

Scott E. Wahlstrom was named Executive Vice President, Human Resources effective December 2016. Previously, Mr. Wahlstrom served as Senior Vice President, Human Resources since January 2012. Prior to that, Mr. Wahlstrom has been

Vice President, Human Resources, since November 1999. Previously, Mr. Wahlstrom was Vice President, Human Resources & Administration of MotivePower Industries, Inc. from August 1996 until November 1999.

John A. Mastalerz was named Senior Vice President of Finance, Corporate Controller and Principal Accounting Officer in July 2017. Previously, Mr. Mastalerz served as Vice President and Corporate Controller from January 2014 to July 2017. Prior to joining Wabtec, Mr. Mastalerz served in various executive management roles with the H.J. Heinz Company from January 2001 to December 2013, most recently as Corporate Controller and Principal Accounting Officer. Prior to 2001, Mr. Mastalerz was a Senior Manager with PricewaterhouseCoopers.

Paul I. Overby was named Vice President, Corporate Strategy in January of 2016. Prior to joining Wabtec, Mr. Overby was founder and President of Paul Overby Associates from 2009 and prior to that, Mr. Overby served in various executive management roles at Bombardier.

Timothy R. Wesley was named Vice President, Investor Relations and Corporate Communications in November 1999. Previously, Mr. Wesley was Vice President, Investor and Public Relations of MotivePower Industries, Inc. from August 1996 until November 1999.

PART II

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

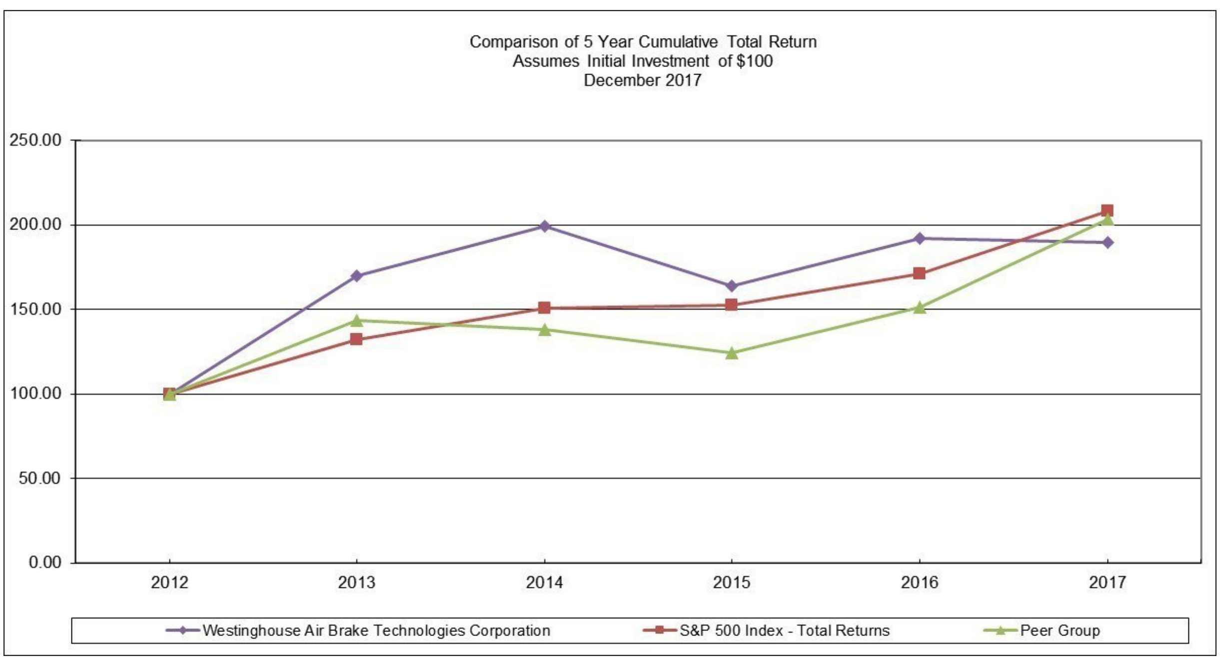
The Common Stock of the Company is listed on the New York Stock Exchange under the symbol "WAB". As of February 16, 2018, there were 96,090,518 shares of Common Stock outstanding held by 473 holders of record. The high and low sales price of the shares and dividends declared per share were as follows:

2017	High	Low	Dividends
First Quarter	$ 88.87	$ 74.06	$ 0.100
Second Quarter	$ 92.00	$ 77.09	$ 0.100
Third Quarter	$ 93.81	$ 69.20	$ 0.120
Fourth Quarter	$ 82.13	$ 71.96	$ 0.120
2016	**High**	**Low**	**Dividends**
First Quarter	$ 80.61	$ 60.28	$ 0.080
Second Quarter	$ 88.46	$ 66.14	$ 0.080
Third Quarter	$ 82.00	$ 65.54	$ 0.100
Fourth Quarter	$ 89.18	$ 74.32	$ 0.100

The Company's 2016 Refinancing Credit Agreement restricts the ability to make dividend payments, with certain exceptions. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" and see Note 8 of "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report.

At the close of business on February 16, 2018, the Company's Common Stock traded at $77.27 per share.

The following performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the Securities and Exchange Commission, nor shall such information be incorporated by reference to any future filings under the Securities Act of 1933 and the Securities Exchange Act of 1934, each as amended, except to the extent that Wabtec specifically incorporates it by reference into such filing. The graph below compares the total stockholder return through December 31, 2017, of Wabtec's common stock to (i) the S&P 500 and (ii) our peer group of manufacturing companies which consists of the following publicly traded companies: AGCO, AMETEK, Colfax, Dana, Dover, Flowserve, The Greenbrier Companies, Navistar, Oshkosh, Regal Beloit, Rockwell Automation, Rockwell Collins, Terex, Trinity Industries, Snap-On, WABCO and Xylem.



Month	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs (1)	Maximum Dollar Value of Shares That May Yet Be Purchased Under the Programs (1)
October 2017	—	—	—	$ 137,824,347
November 2017	—	$ —	—	$ 137,824,347
December 2017	—	$ —	—	$ 137,824,347
Total quarter ended December 31, 2017	—	$ —	—	$ 137,824,347

(1) On February 9, 2016, the Board of Directors amended its stock repurchase authorization to $350.0 million of the Company's outstanding shares. During the twelve months ended December 31, 2017 and 2016, the Company repurchased $0.0 million and $212.2 million, respectively, leaving $137.8 million remaining under the authorization. No time limit was set for the completion of the programs which conforms to the requirements under the 2016 Refinancing Credit Agreement, as well as the senior notes currently outstanding.

The Company intends to purchase shares on the open market or in negotiated or block trades. No time limit was set for the completion of the programs which conform to the requirements under the 2016 Refinancing Credit Agreement, as well as the senior notes currently outstanding.

Item 6. SELECTED FINANCIAL DATA

The following table shows selected consolidated financial information of the Company and has been derived from audited financial statements. This financial information should be read in conjunction with, and is qualified by reference to, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements of the Company and the Notes thereto included elsewhere in this Form 10-K.

	Year Ended December 31,				
In thousands, except per share amounts	**2017**	**2016**	**2015**	**2014**	**2013**
Income Statement Data					
Net sales	$ 3,881,756	$ 2,931,188	$ 3,307,998	$ 3,044,454	$ 2,566,392
Gross profit	1,065,313	924,239	1,047,816	935,982	764,027
Operating expenses	(643,580)	(465,878)	(440,249)	(408,873)	(326,717)
Income from operations	$ 421,733	$ 458,361	$ 607,567	$ 527,109	$ 437,310
Interest expense, net	$ (68,704)	$ (42,561)	$ (16,888)	$ (17,574)	$ (15,341)
Other (expense) income, net	(966)	(2,963)	(5,311)	(1,680)	(882)
Net income attributable to Wabtec shareholders	$ 262,261	$ 304,887	$ 398,628	$ 351,680	$ 292,235
Diluted Earnings per Common Share					
Net income attributable to Wabtec shareholders (1)	$ 2.72	$ 3.34	$ 4.10	$ 3.62	$ 3.01
Cash dividends declared per share (1)	$ 0.44	$ 0.36	$ 0.28	$ 0.20	$ 0.13
Fully diluted shares outstanding (1)	96,125	91,141	97,006	96,885	96,832
Balance Sheet Data					
Total assets	$ 6,579,980	$ 6,581,018	$ 3,229,513	$ 3,303,841	$ 2,821,997
Cash and cash equivalents	233,401	398,484	226,191	425,849	285,760
Total debt	1,870,528	1,892,776	692,238	521,195	450,709
Total equity	2,828,532	2,976,825	1,701,339	1,808,298	1,587,167

(1) Information above for net income attributable to Wabtec shareholders, cash dividends declared per share and fully diluted shares outstanding for all periods presented reflects the two-for-one split of the Company's common stock, which occurred on May 14, 2013.

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

OVERVIEW

Wabtec is one of the world's largest providers of value-added, technology-based products and services for the global rail industry. Our products are found on virtually all U.S. locomotives, freight cars and passenger transit vehicles, as well as in more than 100 countries throughout the world. Our products enhance safety, improve productivity and reduce maintenance costs for customers, and many of our core products and services are essential in the safe and efficient operation of freight rail and passenger transit vehicles. Wabtec is a global company with operations in 31 countries. In 2017, about 66% of the Company's revenues came from customers outside the U.S.

Management Review and Future Outlook

Wabtec's long-term financial goals are to generate cash flow from operations in excess of net income, maintain a strong credit profile while minimizing our overall cost of capital, increase margins through strict attention to cost controls and implementation of the Wabtec Excellence Program, and increase revenues through a focused growth strategy, including product innovation and new technologies, global and market expansion, aftermarket products and services, and acquisitions. In addition, Management evaluates the Company's current operational performance through measures such as quality and on-time delivery.

The Company primarily serves the worldwide freight and transit rail industries. As such, our operating results are largely dependent on the level of activity, financial condition and capital spending plans of railroads and passenger transit agencies around the world, and transportation equipment manufacturers who serve those markets. Many factors influence these industries, including general economic conditions; traffic volumes, as measured by freight carloadings and passenger ridership; government spending on public transportation; and investment in new technologies. In general, trends such as increasing urbanization, a focus on sustainability and environmental awareness, an aging equipment fleet, and growth in global trade are expected to drive continued investment in freight and transit rail.

The Company monitors a variety of factors and statistics to gauge market activity. Freight rail markets around the world are driven primarily by overall economic conditions and activity, while Transit markets are driven primarily by government funding and passenger ridership. Changes in these market drivers can cause fluctuations in demand for Wabtec's products and services.

According to the 2016 edition of a market study by UNIFE, the Association of the European Rail Industry, the accessible global market for railway products and services was more than $100 billion, and was expected to grow at about 3.2% annually through 2021. The three largest geographic markets, which represented about 80% of the total accessible market, were Europe, North America and Asia Pacific. UNIFE projected above-average growth in Asia Pacific and Europe due to overall economic growth and trends such as urbanization and increasing mobility, deregulation, investments in new technologies, energy and environmental issues, and increasing government support. The largest product segments of the market were rolling stock, services and infrastructure, which represented almost 90% of the accessible market. UNIFE projected spending on rolling stock to grow at an above-average rate due to increased investment in passenger transit vehicles. UNIFE estimated that the global installed base of locomotives was about 114,000 units, with about 32% in Asia Pacific, about 25% in North America and about 18% in Russia-CIS (Commonwealth of Independent States). Wabtec estimates that about 2,600 new locomotives were delivered worldwide in 2017, and it expects deliveries of about 2,700 in 2018. UNIFE estimated the global installed base of freight cars was about 5.5 million units, with about 37% in North America, about 26% in Russia-CIS and about 20% in Asia Pacific. Wabtec estimates that about 155,000 new freight cars were delivered worldwide in 2017, and it expects deliveries of about 148,000 in 2018. UNIFE estimated the global installed base of passenger transit vehicles to be about 569,000 units, with about 43% in Asia Pacific, about 32% in Europe and about 14% in Russia-CIS. Wabtec estimates that about 34,000 new passenger transit vehicles were delivered worldwide in 2017, and it expects deliveries of about 44,000 in 2018.

In Europe, the majority of the rail system serves the passenger transit market, which is expected to continue growing as energy and environmental factors encourage continued investment in public mass transit. According to UNIFE, France, Germany and the United Kingdom were the largest Western European transit markets, representing almost two-thirds of industry spending in the European Union. UNIFE projected the Western European rail market to grow at about 3.6% annually, led by investments in new rolling stock in France and Germany. Significant investments were also expected in Turkey, the largest market in Eastern Europe. About 75% of freight traffic in Europe is hauled by truck, while rail accounts for about 20%. The largest freight markets in Europe are Germany, Poland and the United Kingdom. In recent years, the European Commission has adopted a series of measures designed to increase the efficiency of the European rail network by standardizing operating rules and certification requirements. UNIFE believes that adoption of these measures should have a positive effect on ridership and investment in public transportation over time.

In North America, railroads carry about 40% of intercity freight, as measured by ton-miles, which is more than any other mode of transportation. Through direct ownership and operating partnerships, U.S. railroads are part of an integrated network that includes railroads in Canada and Mexico, forming what is regarded as the world's most-efficient and lowest-cost freight rail service. There are more than 500 railroads operating in North America, with the largest railroads, referred to as "Class I," accounting for more than 90% of the industry's revenues. The railroads carry a wide variety of commodities and goods, including coal, metals, minerals, chemicals, grain, and petroleum. These commodities represent about 50% of total rail carloadings, with intermodal carloads accounting for the rest. Railroads operate in a competitive environment, especially with the trucking industry, and are always seeking ways to improve safety, cost and reliability. New technologies offered by Wabtec and others in the industry can provide some of these benefits. Demand for our freight related products and services in North America is driven by a number of factors, including rail traffic, and production of new locomotives and new freight cars. In the U.S., the passenger transit industry is dependent largely on funding from federal, state and local governments, and from fare box revenues. Demand for North American passenger transit products is driven by a number of factors, including government funding, deliveries of new subway cars and buses, and ridership. The U.S. federal government provides money to local transit authorities, primarily to fund the purchase of new equipment and infrastructure for their transit systems.

Growth in the Asia Pacific market has been driven mainly by the continued urbanization of China and India, and by investments in freight rail rolling stock and infrastructure in Australia to serve its mining and natural resources markets. India is making significant investments in rolling stock and infrastructure to modernize its rail system; for example, the country has awarded a 1,000-unit locomotive order to a U.S. manufacturer. UNIFE expected the increased spending in India to offset decreased spending on very-high-speed rolling stock in China.

Other key geographic markets include Russia-CIS and Africa-Middle East. With about 1.4 million freight cars and about 20,000 locomotives, Russia-CIS is among the largest freight rail markets in the world, and it's expected to invest in both freight and transit rolling stock. PRASA, the Passenger Rail Agency of South Africa, is expected to continue to invest in new transit cars and new locomotives. According to UNIFE, emerging markets were expected to grow at above-average rates as global trade led to increased freight volumes and urbanization led to increased demand for efficient mass-transportation systems. As this growth occurs, Wabtec expects to have additional opportunities to provide products and services in these markets.

In its study, UNIFE also said it expected increased investment in digital tools for data and asset management, and in rail control technologies, both of which would improve efficiency in the global rail industry. UNIFE said data-driven asset management tools have the potential to reduce equipment maintenance costs and improve asset utilization, while rail control technologies have been focused on increasing track capacity, improving operational efficiency and ensuring safer railway traffic. Wabtec offers products and services to help customers make ongoing investments in these initiatives.

In 2018 and beyond, general global economic and market conditions will have an impact on our sales and operations. To the extent that these factors cause instability of capital markets, shortages of raw materials or component parts, longer sales cycles, deferral or delay of customer orders or an inability to market our products effectively, our business and results of operations could be materially adversely affected. In addition, we face risks associated with our four-point growth strategy including the level of investment that customers are willing to make in new technologies developed by the industry and the Company, and risks inherent in global expansion. When necessary, we will modify our financial and operating strategies to reflect changes in market conditions and risks.

ACQUISITION OF FAIVELEY TRANSPORT S.A.

On November 30, 2016, the Company acquired majority ownership of Faiveley Transport S.A. ("Faiveley Transport") under the terms of a Share Purchase Agreement ("Share Purchase Agreement"). Faiveley Transport is a leading global provider of value-added, integrated systems and services for the railway industry with annual sales of about $1.2 billion and more than 5,700 employees in 24 countries. Faiveley Transport supplies railway manufacturers, operators and maintenance providers with a range of value-added, technology-based systems and services in Energy & Comfort (air conditioning, power collectors and converters, and passenger information), Access & Mobility (passenger access systems and platform doors), and Brakes and Safety (braking systems and couplers). The transaction was structured as a step acquisition as follows:

- On November 30, 2016, the Company acquired majority ownership of Faiveley Transport, after completing the purchase of the Faiveley family's ownership interest under the terms of the Share Purchase Agreement, which directed the Company to pay €100 per share of Faiveley Transport, payable between 25% and 45% in cash at the election of those shareholders and the remainder payable in Wabtec stock. The Faiveley family's ownership interest acquired by the Company represented approximately 51% of outstanding share capital and approximately 49% of the outstanding voting shares of Faiveley Transport. Upon completion of the share purchase under the

Share Purchase Agreement, Wabtec commenced a tender offer for the remaining publicly traded Faiveley Transport shares. The public shareholders had the option to elect to receive €100 per share in cash or 1.1538 shares of Wabtec common stock per share of Faiveley Transport. The common stock portion of the consideration was subject to a cap on issuance of Wabtec common shares that was equivalent to the rates of cash and stock elected by the 51% owners.

- On February 3, 2017, the initial cash tender offer was closed, which resulted in the Company acquiring approximately 27% of additional outstanding share capital and voting rights of Faiveley Transport for approximately $411.8 million in cash and $25.2 million in Wabtec stock. After the initial cash tender offer, the Company owned approximately 78% of outstanding share capital and 76% of voting rights.
- On March 6, 2017, the final cash tender offer was closed, which resulted in the Company acquiring approximately 21% of additional outstanding share capital and 22% of additional outstanding voting rights of Faiveley Transport for approximately $303.2 million in cash and $0.3 million in Wabtec stock. After the final cash tender offer, the Company owned approximately 99% of the share capital and 98% of the voting rights of Faiveley Transport.
- On March 21, 2017, a mandatory squeeze-out procedure was finalized, which resulted in the Company acquiring the Faiveley Transport shares not tendered in the offers for approximately $17.5 million in cash. This resulted in the Company owning 100% of the share capital and voting rights of Faiveley Transport.

As of November 30, 2016, the date the Company acquired 51% of the share capital and 49% of the voting interest in Faiveley Transport, Faiveley Transport was consolidated under the variable interest entity model as the Company concluded that it was the primary beneficiary of Faiveley Transport as it then possessed the power to direct the activities of Faiveley Transport that most significantly impact its economic performance and it then possessed the obligation and right to absorb losses and benefits from Faiveley Transport.

The purchase price paid for 100% ownership of Faiveley Transport was $1,507 million. The $744.7 million included as deposits in escrow on the consolidated balance sheet at December 31, 2016 was cash designated for use as consideration for the tender offers.

RESULTS OF OPERATIONS

The following table shows our Consolidated Statements of Operations for the years indicated.

	Year Ended December 31,		
In thousands	2017	2016	2015
Net sales	$ 3,881,756	$ 2,931,188	$ 3,307,998
Cost of sales	(2,816,443)	(2,006,949)	(2,260,182)
Gross profit	1,065,313	924,239	1,047,816
Selling, general and administrative expenses	(511,898)	(371,805)	(347,373)
Engineering expenses	(95,166)	(71,375)	(71,213)
Amortization expense	(36,516)	(22,698)	(21,663)
Total operating expenses	(643,580)	(465,878)	(440,249)
Income from operations	421,733	458,361	607,567
Interest expense, net	(68,704)	(42,561)	(16,888)
Other (expense) income, net	(966)	(2,963)	(5,311)
Income from operations before income taxes	352,063	412,837	585,368
Income tax expense	(89,773)	(99,433)	(186,740)
Net income	262,290	313,404	398,628
Net income attributable to noncontrolling interest	(29)	(8,517)	—
Net income attributable to Wabtec shareholders	$ 262,261	$ 304,887	$ 398,628

2017 COMPARED TO 2016

The following table summarizes the results of operations for the period:

	For the year ended December 31,		
In thousands	2017	2016	Percent Change
Freight Segment	$ 1,396,588	$ 1,543,098	(9.5)%
Transit Segment	2,485,168	1,388,090	79.0 %
Net sales	3,881,756	2,931,188	32.4 %
Income from operations	421,733	458,361	(8.0)%
Net income attributable to Wabtec shareholders	$ 262,261	$ 304,887	(14.0)%

The following table shows the major components of the change in sales in 2017 from 2016:

In thousands	Freight Segment	Transit Segment	Total
2016 Net Sales	$ 1,543,098	$ 1,388,090	$ 2,931,188
Acquisitions	148,122	1,035,061	1,183,183
Change in Sales by Product Line:			
Specialty Products & Electronics	(164,532)	8,502	(156,030)
Remanufacturing, Overhaul & Build	(79,129)	10,548	(68,581)
Brake Products	(51,595)	2,473	(49,122)
Other	(480)	1,397	917
Transit Products	—	45,462	45,462
Foreign exchange	1,104	(6,365)	(5,261)
2017 Net Sales	$ 1,396,588	$ 2,485,168	$ 3,881,756

Net sales increased by $950.6 million to $3,881.8 million in 2017 from $2,931.2 million in 2016. The increase is due to sales from acquisitions of $1,183.2 million with the majority related to the Faiveley Transport acquisition. This increase was partially offset by a $156.0 million decrease for Specialty Products and Electronics due to lower demand for freight original equipment rail products and train control and signaling products and services, a $68.6 million decrease for Remanufacturing, Overhaul and Build primarily due to the absence of a large locomotive rebuild contract that completed in 2016, and a $49.1 million decrease for Brake products due to lower demand for original equipment brakes from freight and transit customers. Unfavorable foreign exchange decreased sales $5.3 million.

Freight Segment sales decreased by $146.5 million, or 9.5%, primarily due to a $164.5 million decrease for Specialty Products and Electronics sales from lower demand for freight original equipment rail products and train control and signaling products attributable to lower freight car and locomotive builds, a decrease of $79.1 million for Remanufacturing, Overhaul and Build sales due to a large locomotive rebuild contract that was completed in 2016, and a $51.6 million decrease in Brake Products sales from lower demand for original equipment brakes and aftermarket services. Acquisitions increased sales by $148.1 million and favorable foreign exchange increased sales by $1.1 million.

Transit Segment sales increased by $1,097.1 million, or 79.0%, primarily due to an increase in sales from acquisitions of $1,035.1 million with the majority related to the Faiveley Transport acquisition. Additionally, Transit Products sales increased $45.5 million from increased demand in original train doors, air conditioning systems, and other transit electronics, Overhaul & Build sales increased $10.5 million due to an increase in transit overhaul demand, and Specialty Products & Electronics sales increased $8.5 million due to increased demand for transit train control and signaling products and services. Unfavorable foreign exchange decreased sales by $6.4 million.

Cost of Sales and Gross Profit The following table shows the major components of cost of sales for the periods indicated:

	Twelve Months Ended December 31, 2017					
In thousands	**Freight**	**Percentage of Sales**	**Transit**	**Percentage of Sales**	**Total**	**Percentage of Sales**
Material	$ 526,727	37.7%	$ 1,123,571	45.2%	$ 1,650,298	42.5%
Labor	186,863	13.4%	339,110	13.6%	525,973	13.5%
Overhead	233,786	16.7%	341,389	13.7%	575,175	14.8%
Other/Warranty	7,148	0.5%	57,849	2.3%	64,997	1.7%
Total cost of sales	$ 954,524	68.3%	$ 1,861,919	74.8%	$ 2,816,443	72.5%

	Twelve Months Ended December 31, 2016					
In thousands	**Freight**	**Percentage of Sales**	**Transit**	**Percentage of Sales**	**Total**	**Percentage of Sales**
Material	$ 590,876	38.3%	$ 587,516	42.3%	$ 1,178,392	40.2%
Labor	176,518	11.4%	170,481	12.3%	346,999	11.8%
Overhead	242,956	15.7%	213,821	15.4%	456,777	15.6%
Other/Warranty	5,575	0.4%	19,206	1.4%	24,781	0.8%
Total cost of sales	$ 1,015,925	65.8%	$ 991,024	71.4%	$ 2,006,949	68.4%

Cost of sales increased by $809.5 million to $2,816.4 million in 2017 compared to $2,006.9 million in the same period of 2016. For the twelve months ended 2017, cost of sales as a percentage of sales was 72.5% compared to 68.4% in the same period of 2016. The increase as a percentage of sales is due to product mix largely attributable to higher transit segment sales due to acquisitions, along with an unfavorable product mix within the freight segment. Also contributing to the increase were higher project adjustments of $44.5 million recorded on certain existing contracts and $11.8 million of restructuring and integration costs related to recent acquisitions.

Freight Segment cost of sales increased 2.5% as a percentage of sales to 68.3% in 2017 compared to 65.8% for the same period of 2016. The increase is primarily related to lower demand for freight original equipment rail products and train control and signaling products and services which typically offer a higher margin, higher project adjustments of $6.9 million on certain existing contracts related to labor, material and warranty costs, and $4.5 million of restructuring and integration costs related to recent acquisitions.

Transit Segment cost of sales increased 3.4% as a percentage of sales to 74.8% in 2017 compared to 71.4% for the same period in 2016. The increase is primarily related to product mix largely attributable to the acquisition of Faiveley Transport, which has lower overall margins and higher project adjustments of $37.6 million on certain existing contracts primarily related to material and warranty costs and $7.3 million of restructuring and integration costs related to recent acquisitions.

Included in cost of sales is warranty expense. The provision for warranty expense is generally established for specific losses, along with historical estimates of customer claims as a percentage of sales, which can cause variability in warranty expense between quarters. Warranty expense was $50.4 million in 2017 compared to $28.9 million in 2016. The increase in warranty expense is primarily related to the increase in sales and the contract adjustments noted above.

Operating expenses The following table shows our operating expenses:

In thousands	For the year ended December 31, 2017	Percentage of Sales	2016	Percentage of Sales
Selling, general and administrative expenses	$ 511,898	13.2%	$ 371,805	12.7%
Engineering expenses	95,166	2.5%	71,375	2.4%
Amortization expense	36,516	0.9%	22,698	0.8%
Total operating expenses	$ 643,580	16.6%	$ 465,878	15.9%

Total operating expenses were 16.6% and 15.9% of sales for 2017 and 2016, respectively. Selling, general, and administrative expenses increased $140.1 million, or 37.7%, primarily due to $174.7 million in incremental expense from acquisitions partially offset by lower costs due to cost saving initiatives and lower organic sales volumes. Engineering expense increased $23.8 million or 33.3% primarily due to additional expenses from acquisitions and remained a relatively consistent as a percentage of sales. Amortization expense increased $13.8 million due to amortization of intangibles associated with new acquisitions.

The following table shows our segment operating expenses:

In thousands	For the year ended December 31, 2017	2016	Percent Change
Freight Segment	$ 177,460	$ 182,718	(2.9)%
Transit Segment	434,704	225,620	92.7 %
Corporate	31,416	57,540	(45.4)%
Total operating expenses	$ 643,580	$ 465,878	38.1 %

Freight Segment operating expenses decreased $5.3 million, or 2.9%, in 2017 and increased 150 basis points to 12.7% of sales. The decrease is primarily attributable to reduced sales volumes and realized benefits associated with the cost saving initiatives undertaken in 2017 partially offset by $19.7 million of incremental operating expenses from acquisitions and $3.2 million related to integration and restructuring costs.

Transit Segment operating expenses increased $209.1 million, or 92.7%, in 2017 and increased 290 basis points to 17.5% of sales. The increase is primarily related to $191 million of incremental operating expenses related to acquisitions and $20 million related to integration and restructuring costs related to recent acquisitions.

Corporate non-allocated operating expenses decreased $26.1 million in 2017 primarily due to a decrease in Faiveley Transport transaction and integration costs as well as benefits from cost savings initiatives undertaken in 2017 and 2016.

Interest expense, net Overall interest expense, net, increased $26.1 million in 2017 due to a higher overall debt balance in 2017 compared to 2016, primarily related to the Faiveley Transport acquisition and higher interest rates.

Other expense, net Other expense, net, decreased $2.0 million to $1.0 million for 2017, compared to 2016 primarily due to an increase in equity income earned on unconsolidated subsidiaries.

Income taxes The effective income tax rate was 25.5% and 24.1% in 2017 and 2016, respectively. On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "U.S. tax reform bill"). On December 23, 2017, the French government enacted the Finance Act for 2018 and it was published in the Official Bulletin on December 31, 2017. As a result, tax expense increased by $55.0 million related to the U.S. tax reform bill, see Note 10 of "Notes to Consolidated Financial Statements" included in Part IV, Item 8 of this report for further explanation. This was offset by decreases of $50.7 million primarily due to the revaluation of the net U.S. and French deferred tax liabilities as a result of the tax law enactments and the result of a lower earnings mix in higher tax rate jurisdictions. The net favorable deferred tax benefits related to the adjustment of deferred tax liabilities which had originally been established in prior periods.

2016 COMPARED TO 2015

The following table summarizes the results of operations for the period:

In thousands	For the year ended December 31, 2016	2015	Percent Change
Freight Segment	$ 1,543,098	$ 2,054,715	(24.9)%
Transit Segment	1,388,090	1,253,283	10.8 %
Net sales	2,931,188	3,307,998	(11.4)%
Income from operations	458,361	607,567	(24.6)%
Net income attributable to Wabtec shareholders	$ 313,404	$ 398,628	(21.4)%

The following table shows the major components of the change in sales in 2016 from 2015:

In thousands	Freight Segment	Transit Segment	Total
2015 Net Sales	$ 2,054,715	$ 1,253,283	$ 3,307,998
Acquisition	55,097	134,095	189,192
Change in Sales by Product Line:			
Specialty Products & Electronics	(438,285)	35,611	(402,674)
Remanufacturing, Overhaul & Build	(33,700)	22,743	(10,957)
Brake Products	(50,665)	(4,442)	(55,107)
Transit Products	—	656	656
Other	(26,908)	57	(26,851)
Foreign exchange	(17,156)	(53,913)	(71,069)
2016 Net Sales	$ 1,543,098	$ 1,388,090	$ 2,931,188

Net sales decreased by $376.8 million to $2,931.2 million in 2016 from $3,308.0 million in 2015. The decrease is primarily due to lower sales for Specialty Products and Electronics of $402.7 million and lower Brake Products sales of $55.1 million due to decreased demand for freight products attributable to lower freight car and locomotive builds, and train control and signaling products and services, and lower Other Products sales of $26.9 million from decreased demand for freight spare part kits. Acquisitions increased sales $189.2 million and unfavorable foreign exchange decreased sales $71.1 million.

Freight Segment sales decreased by $511.6 million, or 24.9%, primarily due to a $438.3 million decrease for Specialty Products and Electronics sales from lower demand for freight original equipment rail products and train control and signaling products attributable to lower freight car and locomotive builds, a decrease of $50.7 million for Brake Products sales from lower demand for original equipment brakes and aftermarket services, a decrease of $33.7 million for Remanufacturing, Overhaul and Build sales due to a large locomotive rebuild contract that completed in 2016, and a decrease of $26.9 million for Other Product sales from decreased demand for freight spare part kits. Acquisitions increased sales by $55.1 million and unfavorable foreign exchange decreased sales by $17.2 million.

Transit Segment sales increased by $134.8 million, or 10.8%, primarily due to a $35.6 million increase for Specialty Products and Electronics from higher demand for original equipment conduction systems and current collectors, and an increase of $22.7 million for Remanufacturing, Overhaul and Build sales from higher demand for aftermarket locomotive builds. Acquisitions increased sales by $134.1 million and unfavorable foreign exchange decreased sales by $53.9 million.

Cost of Sales and Gross Profit The following table shows the major components of cost of sales for the periods indicated:

	Twelve Months Ended December 31, 2016					
In thousands	**Freight**	**Percentage of Sales**	**Transit**	**Percentage of Sales**	**Total**	**Percentage of Sales**
Material	$ 590,876	38.3%	$ 587,516	42.3%	$ 1,178,392	40.2%
Labor	176,518	11.4%	170,481	12.3%	346,999	11.8%
Overhead	242,956	15.7%	213,821	15.4%	456,777	15.6%
Other/Warranty	5,575	0.4%	19,206	1.4%	24,781	0.8%
Total cost of sales	$ 1,015,925	65.8%	$ 991,024	71.4%	$ 2,006,949	68.4%

	Twelve Months Ended December 31, 2015					
In thousands	**Freight**	**Percentage of Sales**	**Transit**	**Percentage of Sales**	**Total**	**Percentage of Sales**
Material	$ 854,728	41.6%	$ 531,152	42.4%	$ 1,385,880	41.9%
Labor	219,495	10.7%	156,357	12.5%	375,852	11.4%
Overhead	282,132	13.7%	182,501	14.6%	464,633	14.0%
Other/Warranty	5,926	0.3%	27,891	2.2%	33,817	1.0%
Total cost of sales	$ 1,362,281	66.3%	$ 897,901	71.7%	$ 2,260,182	68.3%

Cost of sales decreased by $253.2 million to $2,006.9 million in 2016 compared to $2,260.2 million in the same period of 2015. For the twelve months ended 2016, cost of sales as a percentage of sales was 68.4% compared to 68.3% in the same period of 2015.

Freight Segment cost of sales decreased 0.5% as a percentage of sales to 65.8% in 2016 compared to 66.3% for the same period of 2015. The decrease as a percentage of sales is primarily related to sales with lower material content, lower overall material costs due to ongoing sourcing efforts, and decreases in various commodity prices partially offset by an increase in overhead costs as a percentage of sales which is primarily due to certain fixed overhead costs.

Transit Segment cost of sales decreased 0.3% as a percentage of sales to 71.4% in 2016 compared to 71.7% for the same period in 2015. The decrease is primarily due to better margin performance from prior year acquisitions and ongoing sourcing savings. These benefits were partially offset by $13.8 million of costs related to adjustments on certain long-term contracts.

Included in cost of sales is warranty expense. The provision for warranty expense is generally established for specific losses, along with historical estimates of customer claims as a percentage of sales, which can cause variability in warranty expense between quarters. Warranty expense was $28.9 million in 2016 compared to $35.4 million in 2015.

Operating expenses The following table shows our operating expenses:

	For the year ended December 31,			
In thousands	**2016**	**Percentage of Sales**	**2015**	**Percentage of Sales**
Selling, general and administrative expenses	$ 371,805	12.7%	$ 347,373	10.5%
Engineering expenses	71,375	2.4%	71,213	2.2%
Amortization expense	22,698	0.8%	21,663	0.7%
Total operating expenses	$ 465,878	15.9%	$ 440,249	13.4%

Total operating expenses were 15.9% and 13.4% of sales for 2016 and 2015, respectively. Selling, general, and administrative expenses increased $24.4 million, or 7.0%, primarily due to $38.9 million of costs related to the Faiveley acquisition and $5.4 million in costs related to restructuring activity. These costs were partially offset by lower incentive and non-cash compensation expense and the effects of foreign exchange. Engineering expense was consistent with the prior year. Amortization expense increased $1.0 million due to amortization of intangibles associated with acquisitions.

The following table shows our segment operating expenses:

In thousands	For the year ended December 31, 2016	2015	Percent Change
Freight Segment	$ 182,718	$ 208,773	(12.5)%
Transit Segment	225,620	205,415	9.8 %
Corporate	57,540	26,061	120.8 %
Total operating expenses	$ 465,878	$ 440,249	5.8 %

Freight Segment operating expenses decreased $26.1 million, or 12.5%, in 2016 and increased 160 basis points to 11.8% of sales. The decrease is primarily attributable to reduced sales volumes and realized benefits associated with the cost saving initiatives undertaken in 2016 partially offset by $8.8 million of incremental operating expenses from acquisitions.

Transit Segment operating expenses increased $20.2 million, or 9.8%, in 2016 and decreased 10 basis points to 16.3% of sales. The increase is primarily related to $26.2 million of incremental operating expenses related to acquisitions and $7.1 million related to the Faiveley Transport transaction. This increase is partially offset by lower operating expenses due to foreign exchange.

Corporate non-allocated operating expenses increased $31.5 million in 2016 primarily due to $31.8 million of costs related to the Faiveley acquisition partially offset by realized benefits from cost saving initiatives in 2016.

Interest expense, net Overall interest expense, net, increased $25.7 million in 2016 due to a higher overall debt balance in 2016 compared to 2015, primarily related to the Faiveley Transport acquisition and $14.9 million of debt refinancing costs. Refer to Note 8 of "Notes to Condensed Consolidated Financial Statements" included in Part IV, Item 15 of this report for additional information on debt.

Other expense, net Other expense, net, decreased $2.3 million to $3.0 million for 2016, compared to 2015 primarily due to foreign exchange adjustments.

Income taxes The effective income tax rate was 24.1% and 31.9% in 2016 and 2015, respectively. The decrease in the effective rate is primarily the result of an enacted tax rate change which reduces the corporate income tax rate in France and a higher earnings mix in lower tax rate jurisdictions, partially offset by 2016 transaction charges related to the acquisition of Faiveley Transport that are not deductible.

Liquidity and Capital Resources

Liquidity is provided by operating cash flow and borrowings under the Company's unsecured credit facility with a consortium of commercial banks. The following is a summary of selected cash flow information and other relevant data:

In thousands	For the year ended December 31, 2017	2016	2015
Cash provided by (used for):			
Operating activities	$ 188,811	$ 450,530	$ 450,844
Investing activities	(275,729)	(775,065)	(380,136)
Financing activities:			
Proceeds from debt	1,216,740	1,875,000	787,400
Payments of debt	(1,269,537)	(1,102,748)	(612,680)
Stock repurchases	—	(212,176)	(387,787)
Cash dividends	(42,218)	(32,430)	(26,963)
Other	(2,416)	(4,675)	(11,468)

Operating activities. Cash provided by operations in 2017 was $188.8 million compared with $450.5 million in 2016. In comparison to 2016, cash provided by operations decreased due to unfavorable working capital performance and lower net income of $51.1 million. The major components of working capital were as follows: an unfavorable change of $88.4 million in accounts receivable primarily due to higher sales, an unfavorable change in accounts payable of $72.8 million due to the timing of payments to suppliers, an unfavorable change of $25.4 million in other assets and liabilities primarily due to an unfavorable change in accrued liabilities due to payments related to contract liabilities, accrued expenses, and acquisition costs in 2017, and an unfavorable change in inventory of $54.3 million due to efforts to ramp up production in anticipation of stronger product demand in 2018.

Cash provided by operations in 2016 was $450.5 million compared with $450.8 million in 2015. In comparison to 2015, cash provided by operations in 2016 changed due to favorable working capital requirements partially offset by lower operating results. The favorable working capital requirements primarily related to a $57.7 million favorable change in accounts payable principally due to the timing of payments, $25.2 million favorable change in inventory driven by successful efforts to control the amount of inventory on hand. These favorable changes in working capital were partially offset by an unfavorable change in accrued income taxes of $33.5 million driven by lower income taxes owed at the end of 2016 given the decrease in pretax income.

Investing activities. In 2017, 2016 and 2015, cash used in investing activities was $275.7 million, $775.1 million and $380.1 million, respectively. The major components of the cash outflow in 2017 were planned additions to property, plant, and equipment of $89.5 million for continued investments in our facilities and manufacturing processes and $921.5 million in net cash paid for acquisitions. These outflows were partially offset by $734.0 million in cash released from escrow related to the Faiveley acquisition. This compares to $50.2 million for property, plant, and equipment and $183.1 million in net cash paid for acquisitions in 2016. Additionally in 2016, $744.7 million of cash was deposited into escrow to finance the purchase of the noncontrolling interest of Faiveley Transport, which was partially offset by $202.9 million of cash deposited into escrow to finance the purchase of a controlling interest in Faiveley Transport in 2015 and subsequently released from escrow in 2016. Refer to Note 3 of "Notes to Condensed Consolidated Financial Statements" included in Part IV, Item 15 of this report for additional information on acquisitions.

Financing activities. In 2017, cash used for financing activities was $97.4 million, which included $1,216.7 million in proceeds from the revolving credit facility, $1,269.5 million in repayments of debt, and $42.2 million of dividend payments. In 2016, cash provided by financing activities was $523.0 million, which included $1,125.0 million in proceeds from the revolving credit facility debt, $770.0 million of repayments of debt on the revolving credit facility, $332.7 million in repayments of other debt, which was primarily driven by repayments of debt acquired from the purchase of Faiveley Transport, $750.0 million of new borrowings on the 2026 Senior Notes, $32.4 million of dividend payments and $212.2 million of Wabtec stock repurchases.

The following table shows outstanding indebtedness at December 31, 2017 and 2016:

In thousands	December 31, 2017	December 31, 2016
3.45% Senior Notes due 2026, net of unamortized debt issuance costs of $2,345 and $2,526	$ 747,655	$ 747,474
4.375% Senior Notes due 2023, net of unamortized discount and debt issuance costs of $1,433 and $1,690	248,567	248,310
Revolving Credit Facility and Term Loan, net of unamortized debt issuance costs of $2,451 and $3,850	853,124	796,150
Schuldschein Loan	11,998	98,671
Other Borrowings	6,860	1,153
Capital Leases	2,324	1,018
Total	1,870,528	1,892,776
Less - current portion	47,225	129,809
Long-term portion	$ 1,823,303	$ 1,762,967

Wabtec's acquisition of the controlling stake of Faiveley Transport triggered the early repayment of a syndicated loan and the mandatory offer to investors to repay the US and Schuldschein private placements. Both the syndicated loan and US private placements were repaid in full in December 2016.

3.45% Senior Notes Due 2026

In October 2016, the Company issued $750.0 million of Senior Notes due 2026 (the “2016 Notes”). The 2016 Notes were issued at 99.965% of face value. Interest on the 2016 Notes accrues at a rate of 3.45% per annum and is payable semi-annually on May 15 and November 15 of each year. The proceeds were used to finance the cash portion of the Faiveley Transport acquisition, refinance Faiveley Transport’s indebtedness, and for general corporate purposes. The principal balance is due in full at maturity. The Company incurred $2.7 million of deferred financing costs related to the issuance of the 2016 Notes.

The 2016 Notes are senior unsecured obligations of the Company and rank pari passu with all existing and future senior debt and senior to all existing and future subordinated indebtedness of the Company. The indenture under which the 2016 Notes were issued contains covenants and restrictions which limit among other things, the following: the incurrence of indebtedness, payment of dividends and certain distributions, sale of assets, change in control, mergers and consolidations and the incurrence of liens.

The Company is in compliance with the restrictions and covenants in the indenture under which the 2016 Notes were issued and expects that these restrictions and covenants will not be any type of limiting factor in executing our operating activities.

4.375% Senior Notes Due 2023

In August 2013, the Company issued $250.0 million of Senior Notes due 2023 (the “2013 Notes”). The 2013 Notes were issued at 99.879% of face value. Interest on the 2013 Notes accrues at a rate of 4.375% per annum and is payable semi-annually on February 15 and August 15 of each year. The proceeds were used to repay debt outstanding under the Company’s existing credit agreement, and for general corporate purposes. The principal balance is due in full at maturity. The Company incurred $2.6 million of deferred financing costs related to the issuance of the 2013 Notes.

The 2013 Notes are senior unsecured obligations of the Company and rank pari passu with all existing and future senior debt and senior to all existing and future subordinated indebtedness of the Company. The indenture under which the 2013 Notes were issued contains covenants and restrictions which limit among other things, the following: the incurrence of indebtedness, payment of dividends and certain distributions, sale of assets, change in control, mergers and consolidations and the incurrence of liens.

The Company is in compliance with the restrictions and covenants in the indenture under which the 2013 Notes were issued and expects that these restrictions and covenants will not be any type of limiting factor in executing our operating activities.

2016 Refinancing Credit Agreement

On June 22, 2016, the Company amended its existing revolving credit facility with a consortium of commercial banks. This “2016 Refinancing Credit Agreement” provides the Company with a $1.2 billion, 5 year revolving credit facility and a

$400.0 million delayed draw term loan (the “Term Loan”). The Company incurred approximately $3.3 million of deferred financing cost related to the 2016 Refinancing Credit Agreement. The facility expires on June 22, 2021. The 2016 Refinancing Credit Agreement borrowings bear variable interest rates indexed as described below. At December 31, 2017, the Company had available bank borrowing capacity, net of $35.4 million of letters of credit, of approximately $679.0 million, subject to certain financial covenant restrictions.

The Term Loan was drawn on November 25, 2016. The Company incurred a 10 basis point commitment fee from June 22, 2016 until the initial draw on November 25, 2016.

Under the 2016 Refinancing Credit Agreement, the Company may elect a Base Rate of interest for U.S. Dollar denominated loans or, for certain currencies, an interest rate based on the London Interbank Offered Rate (“LIBOR”) of interest, or other rates appropriate for such currencies (in any case, “the Alternate Rate”). The Base Rate adjusts on a daily basis and is the greater of the Federal Funds Effective Rate plus 0.50% per annum, the PNC, N.A. prime rate or the Daily LIBOR Rate plus 100 basis points, plus a margin that ranges from 0 to 75 basis points. The Alternate Rate is based on the quoted rates specific to the applicable currency, plus a margin that ranges from 75 to 175 basis points. Both the Base Rate and Alternate Rate margins are dependent on the Company’s consolidated total indebtedness to EBITDA ratios. The initial Base Rate margin is 0 basis points and the Alternate Rate margin is 175 basis points.

At December 31, 2016, the weighted average interest rate on the Company’s variable rate debt was 2.92%. On January 12, 2012, the Company entered into a forward starting interest rate swap agreement with a notional value of $150.0 million. The effective date of the interest rate swap agreement is July 31, 2013, and the termination date was November 7, 2016. The impact of the interest rate swap agreement converted a portion of the Company’s outstanding debt from a variable rate to a fixed-rate borrowing. During the term of the interest rate swap agreement the interest rate on the notional value was fixed at 1.415% plus the Alternate Rate margin. On June 5, 2014, the Company entered into a forward starting interest rate swap agreement with a notional value of $150.0 million. The effective date of the interest rate swap agreement is November 7, 2016, and the termination date is December 19, 2018. The impact of the interest rate swap agreement converts a portion of the Company’s outstanding debt from a variable rate to a fixed-rate borrowing. During the term of the interest rate swap agreement the interest rate on the notional value will be fixed at 2.56% plus the Alternate Rate margin. As for these agreements, the Company is exposed to credit risk in the event of nonperformance by the counterparties. However, since only the cash interest payments are exchanged, exposure is significantly less than the notional amount. The counterparties are large financial institutions with excellent credit ratings and history of performance. The Company currently believes the risk of nonperformance is negligible.

The 2016 Refinancing Credit Agreement limits the Company’s ability to declare or pay cash dividends and prohibits the Company from declaring or making other distributions, subject to certain exceptions. The 2016 Refinancing Credit Agreement contains various other covenants and restrictions including the following limitations: incurrence of additional indebtedness; mergers, consolidations, sales of assets and acquisitions; additional liens; sale and leasebacks; permissible investments, loans and advances; certain debt payments; and imposes a minimum interest expense coverage ratio of 3.0 and a maximum debt to EBITDA ratio of 3.25. The Company is in compliance with the restrictions and covenants of the 2016 Refinancing Credit Agreement and does not expect that these measurements will limit the Company in executing our operating activities.

Schuldschein Loan, Due 2016

In conjunction with the acquisition of Faiveley Transport, Wabtec acquired $137.2 million of a Schuldshein private placement loan which was originally issued by Faiveley Transport on March 5, 2014 in Germany, in which approximately 20 international investors participated. This loan is denominated in euros. Subsequent to the acquisition of Faiveley Transport, the Company repaid $125.3 million of the outstanding Schuldschein loan. The remaining balance of $12.0 million as of December 31, 2017 matures on March 5, 2024 and bears a fixed rate of 4.00%.

Contractual Obligations and Off-Balance Sheet Arrangements

The Company is obligated to make future payments under various contracts such as debt agreements, lease agreements and has certain contingent commitments such as debt guarantees. The Company has grouped these contractual obligations and off-balance sheet arrangements into operating activities, financing activities, and investing activities in the same manner as they are classified in the Statement of Consolidated Cash Flows to provide a better understanding of the nature of the obligations and arrangements and to provide a basis for comparison to historical information. The table below provides a summary of contractual obligations and off-balance sheet arrangements as of December 31, 2017:

In thousands	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Operating activities:					
Purchase obligations (1)	$ 148,598	$ 22,871	$ 64,661	$ 17,850	$ 43,216
Operating leases (2)	187,406	31,647	53,024	36,694	66,041
Pension benefit payments (3)	174,551	15,651	32,185	34,622	92,093
Postretirement benefit payments (4)	11,371	1,254	2,455	2,354	5,308
Financing activities:					
Interest payments (5)	365,772	62,573	104,500	89,582	109,117
Long-term debt (6)	1,870,528	47,225	331,460	483,587	1,008,256
Dividends to shareholders (7)	46,096	46,096	—	—	—
Other:					
Standby letters of credit (8)	36,803	12,704	4,314	16,690	3,095
Total	$ 2,841,125	$ 240,021	$ 592,599	$ 681,379	$ 1,327,126

(1) Purchase obligations represent non-cancelable contractual obligations at December 31, 2017. In addition, the Company had $368.3 million of open purchase orders for which the related goods or services had not been received. Although open purchase orders are considered enforceable and legally binding, their terms generally allow us the option to cancel, reschedule and adjust our requirements based on our business needs prior to the delivery of goods or performance of services.

(2) Future minimum payments for operating leases are disclosed by year in Note 14 of the “Notes to Consolidated Financial Statements” included in Part IV, Item 15 of this report.

(3) Annual payments to participants are expected to continue into the foreseeable future at the amounts or ranges noted. Pension benefit payments are based on actuarial estimates using current assumptions for discount rates, expected return on long-term assets and rate of compensation increases. The Company expects to contribute about $7.3 million to pension plan investments in 2018. See further disclosure in Note 9 of the “Notes to Consolidated Financial Statements” included in Part IV, Item 15 of this report.

(4) Annual payments to participants are expected to continue into the foreseeable future at the amounts or ranges noted. Postretirement payments are based on actuarial estimates using current assumptions for discount rates and health care costs. See further disclosure in Note 9 of the “Notes to Consolidated Financial Statements” included in Part IV, Item 15 of this report.

(5) Interest payments are payable May and November of each year at 3.45% of $750 million Senior Notes due in 2026. Interest payments are payable February and August of each year at 4.375% of $250 million Senior Notes due in 2023. Interest payments for the Revolving Credit Facility and Capital Leases are based on contractual terms and the Company’s current interest rates.

(6) Scheduled principal repayments of outstanding loan balances are disclosed in Note 8 of the “Notes to Consolidated Financial Statements” included in Part IV, Item 15 of this report.

(7) Shareholder dividends are subject to approval by the Company’s Board of Directors, currently at an annual rate of approximately $46.1 million.

(8) The $36.8 million of standby letters of credit is comprised of $35.3 million in outstanding letters of credit for performance and bid bond purposes and $1.5 million in interest, which expire in various dates through 2050. Amounts include interest payments based on contractual terms and the Company’s current interest rate.

The above table does not reflect uncertain tax positions of $6.9 million, the timing of which are uncertain except for $5.2 million that may become payable during 2017. Refer to Note 10 of the “Notes to Consolidated Financial Statements” for additional information on uncertain tax positions.

Obligations for operating activities. The Company has entered into $148.6 million of material long-term non-cancelable materials and supply purchase obligations. Operating leases represent multi-year obligations for rental of facilities and equipment. Estimated pension funding and post-retirement benefit payments are based on actuarial estimates using current assumptions for discount rates, expected return on long-term assets, rate of compensation increases and health care cost trend rates. Benefits paid for pension obligations were $16.0 million and $13.3 million in 2017 and 2016, respectively. Benefits paid for post-retirement plans were $1.2 million and $0.9 million in 2017 and in 2016, respectively.

Obligations for financing activities. Cash requirements for financing activities consist primarily of long-term debt repayments, interest payments and dividend payments to shareholders. The Company has historically paid quarterly dividends to shareholders, subject to quarterly approval by our Board of Directors, currently at a rate of approximately $46.1 million annually.

The Company arranges for performance bonds to be issued by third party insurance companies to support certain long term customer contracts. At December 31, 2017, the initial value of performance bonds issued on the Company's behalf is about $461 million.

Forward Looking Statements

We believe that all statements other than statements of historical facts included in this report, including certain statements under "Business" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," may constitute forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events. Although we believe that our assumptions made in connection with the forward-looking statements are reasonable, we cannot assure that our assumptions and expectations are correct.

These forward-looking statements are subject to various risks, uncertainties and assumptions about us, including, among other things:

Economic and industry conditions

- prolonged unfavorable economic and industry conditions in the markets served by us, including North America, South America, Europe, Australia, Asia, and South Africa;
- decline in demand for freight cars, locomotives, passenger transit cars, buses and related products and services;
- reliance on major original equipment manufacturer customers;
- original equipment manufacturers' program delays;
- demand for services in the freight and passenger rail industry;
- demand for our products and services;
- orders either being delayed, canceled, not returning to historical levels, or reduced or any combination of the foregoing;
- consolidations in the rail industry;
- continued outsourcing by our customers;
- industry demand for faster and more efficient braking equipment;
- fluctuations in interest rates and foreign currency exchange rates; or
- availability of credit;

Operating factors

- supply disruptions;
- technical difficulties;
- changes in operating conditions and costs;
- increases in raw material costs;
- successful introduction of new products;
- performance under material long-term contracts;
- labor relations;
- the outcome of our existing or any future legal proceedings, including litigation involving our principal customers and any litigation with respect to environmental matters, asbestos-related matters, pension liabilities, warranties, product liabilities or intellectual property claims;
- completion and integration of acquisitions, including the acquisition of Faiveley Transport; or
- the development and use of new technology;

Competitive factors

- the actions of competitors; or
- the outcome of negotiations with partners, suppliers, customers or others;

Political/governmental factors

- political stability in relevant areas of the world;
- future regulation/deregulation of our customers and/or the rail industry;
- levels of governmental funding on transit projects, including for some of our customers;
- political developments and laws and regulations, including those related to Positive Train Control; or
- federal and state income tax legislation; and
- the outcome of negotiations with governments.

Statements in this 10-K apply only as of the date on which such statements are made, and we undertake no obligation to update any statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events.

Critical Accounting Estimates

The preparation of the financial statements in accordance with generally accepted accounting principles requires Management to make judgments, estimates and assumptions regarding uncertainties that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Areas of uncertainty that require judgments, estimates and assumptions include the accounting for allowance for doubtful accounts, inventories, the testing of goodwill and other intangibles for impairment, warranty reserves, pensions and other postretirement benefits, stock based compensation and tax matters. Management uses historical experience and all available information to make these judgments and estimates, and actual results will inevitably differ from those estimates and assumptions that are used to prepare the Company's financial statements at any given time. Despite these inherent limitations, Management believes that Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) and the financial statements and related footnotes provide a meaningful and fair perspective of the Company. A discussion of the judgments and uncertainties associated with accounting for derivatives and environmental matters can be found in Notes 2 and 17, respectively, in the "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report.

A summary of the Company's significant accounting policies is included in Note 2 in the "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report and is incorporated by reference herein. Management believes that the application of these policies on a consistent basis enables the Company to provide the users of the financial statements with useful and reliable information about the Company's operating results and financial condition.

Accounts Receivable and Allowance for Doubtful Accounts:

Description The Company provides an allowance for doubtful accounts to cover anticipated losses on uncollectible accounts receivable.

Judgments and Uncertainties The allowance for doubtful accounts receivable reflects our best estimate of probable losses inherent in our receivable portfolio determined on the basis of historical experience, specific allowances for known troubled accounts and other currently available evidence.

Effect if Actual Results Differ From Assumptions If our estimates regarding the collectability of troubled accounts, and/or our actual losses within our receivable portfolio exceed our historical experience, we may be exposed to the expense of increasing our allowance for doubtful accounts.

Inventories:

Description Inventories are stated at the lower of cost or market and are reviewed to ensure that an adequate provision is recognized for excess, slow moving and obsolete inventories.

Judgments and Uncertainties Cost is determined under the first-in, first-out (FIFO) method. Inventory costs include material, labor and overhead. The Company compares inventory components to prior year sales history and current backlog and anticipated future requirements. To the extent that inventory parts exceed estimated usage and demand, a reserve is recognized to reduce the carrying value of inventory. Also, specific reserves are established for known inventory obsolescence.

Effect if Actual Results Differ From Assumptions If the market value of our products were to decrease due to changing market conditions, the Company could be at risk of incurring write-downs to adjust inventory value to a market value lower than stated cost. If our estimates regarding sales and backlog requirements are inaccurate, we may be exposed to the expense of increasing our reserves for slow moving and obsolete inventory.

Goodwill and Indefinite-Lived Intangibles:

Description Goodwill and indefinite-lived intangibles are required to be tested for impairment at least annually. The Company performs its annual impairment test during the fourth quarter and more frequently when indicators of impairment are present. The Company reviews goodwill for impairment at the reporting unit level. The evaluation of impairment involves comparing the current fair value of the business to the recorded value (including goodwill).

Judgments and Uncertainties A number of significant assumptions and estimates are involved in the application of the impairment test, including the identification of macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, Wabtec specific events and share price trends and making the assessment on whether each relevant factor will impact the impairment test positively or negatively and the magnitude of any such amount.

Effect if Actual Results Differ From Assumptions Management considers historical experience and all available information at the time the fair values of its reporting units are estimated. However, actual amounts realized may differ from those used to evaluate the impairment of goodwill. If actual results are not consistent with our assumptions and judgments used in estimating future cash flows and asset fair values, we may be exposed to impairment losses that could be material to our results of operations. For example, based on the quantitative analysis performed as of October 1, 2017, a decline in the terminal growth rate by 50 basis points would decrease fair market value by $334 million, or an increase in the weighted-average cost of capital by 100 basis points would result in a decrease in fair market value by $984 million. Even with such changes the fair value of the reporting units would be greater than their net book values, necessitating no Step 2 calculations. See Note 2 in the "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report for additional discussion regarding impairment testing.

Warranty Reserves:

Description The Company provides warranty reserves to cover expected costs from repairing or replacing products with durability, quality or workmanship issues occurring during established warranty periods.

Judgments and Uncertainties In general, reserves are provided for as a percentage of sales, based on historical experience. In addition, specific reserves are established for known warranty issues and their estimable losses.

Effect if Actual Results Differ From Assumptions If actual results are not consistent with the assumptions and judgments used to calculate our warranty liability, the Company may be at risk of realizing material gains or losses.

Accounting for Pensions and Postretirement Benefits:

Description The Company provides pension and postretirement benefits for its employees. These amounts are determined using actuarial methodologies and incorporate significant assumptions, including the rate used to discount the future estimated liability, the long-term rate of return on plan assets and several assumptions relating to the employee workforce (salary increases, medical costs, retirement age and mortality).

Judgments and Uncertainties Significant judgments and estimates are used in determining the liabilities and expenses for pensions and other postretirement benefits. The rate used to discount future estimated liabilities is determined considering the rates available at year-end on debt instruments that could be used to settle the obligations of the plan. The long-term rate of return is estimated by considering historical returns and expected returns on current and projected asset allocations and is generally applied to a five-year average market value of assets. The differences between actual and expected asset returns are recognized in expense using the normal amortization of gains and losses per ASC 715.

Effect if Actual Results Differ From Assumptions If assumptions used in determining the pension and other postretirement benefits change significantly, these costs can fluctuate materially from period to period. The key assumptions in determining the pension and other postretirement expense and obligation include the discount rate, expected return on assets and health care cost trend rate. For example, a 1% decrease or increase in the discount rate used in determining the pension and postretirement expense would increase expense $1.2 million or decrease expense $1.8 million, respectively. A 1% decrease or increase in the discount rate used in determining the pension and postretirement obligation would increase the obligation $53.1 million or decrease the obligation $67.2 million, respectively. A 1% decrease or increase in the expected return on assets used in determining the pension expense would increase or decrease expense $3.0 million. If the actual asset values at December 31, 2017 had been 1% lower, the amortization of losses in the following year would decrease $0.2 million. A 1% decrease or increase in the health care cost trend rate used in determining the postretirement expense would increase or decrease the expense less than $0.1 million. A 1% decrease or increase in the health care cost trend rate used in determining the postretirement obligation would increase or decrease the obligation $0.3 million.

Stock-based Compensation:

Description The Company has issued incentive stock units to eligible employees that vest upon attainment of certain cumulative three-year performance goals. The program is structured as a rolling three-year plan; each year starts a new three-year performance cycle with the most recently completed cycle being 2015-2017. No incentive stock units will vest for performance below the three-year cumulative threshold. The Company utilizes an economic profit measure for this performance goal. Economic profit is a measure of the extent to which the Company produces financial results in excess of its cost of capital. Based on the Company's achievement of the threshold and three-year cumulative performance, the stock units vested can range from 0% to 200% of the shares granted.

Judgments and Uncertainties Significant judgments and estimates are used in determining the estimated three-year performance, which is then used to estimate the total shares expected to vest over the three year vesting cycle and corresponding expense based on the grant date fair value of the award. When determining the estimated three-year performance, the Company utilizes a combination of historical actual results, budgeted results and forecasts. In the initial grant year of a performance cycle, the Company estimates the three-year performance at 100%. As actual performance results for a cycle begin to accumulate and the Company completes its budgeting and forecasting cycles the performance estimates are updated. These judgments and estimates are reviewed and updated on a quarterly basis.

Effect if Actual Results Differ From Assumptions If assumptions used in determining the estimated three-year performance change significantly, stock-based compensation expense related to the unvested incentive stock awards can fluctuate materially from period to period. For example, a 10% decrease or increase in the estimated vesting percentage for incentive stock awards would decrease or increase stock-based compensation expense by approximately $0.7 million and $0.7 million, respectively.

Income Taxes:

Description Wabtec records an estimated liability or benefit for income and other taxes based on what it determines will likely be paid in various tax jurisdictions in which it operates in accordance with ASC 740-10 Accounting for Income Taxes and Accounting for Uncertainty in Income Taxes.

Judgments and Uncertainties The estimate of our tax obligations are uncertain because Management must use judgment to estimate the exposures associated with our various filing positions, as well as realization of our deferred tax assets. ASC 740-10 establishes a recognition and measurement threshold to determine the amount of tax benefit that should be recognized related to uncertain tax positions.

Effect if Actual Results Differ From Assumptions Management uses its best judgment in the determination of these amounts. However, the liabilities ultimately realized and paid are dependent on various matters including the resolution of the tax audits in the various affected tax jurisdictions and may differ from the amounts recorded. An adjustment to the estimated liability would be recorded through income in the period in which it becomes probable that the amount of the actual liability differs from the recorded amount. A deferred tax valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Revenue Recognition:

Description Revenue is recognized in accordance with ASC 605 "Revenue Recognition." The Company recognizes revenues on long-term contracts based on the percentage of completion method of accounting. The units-of-delivery method or other input-based or output-based measures, as appropriate, are used to measure the progress toward completion of individual contracts. Contract revenues and cost estimates are reviewed and revised at a minimum quarterly and adjustments are reflected in the accounting period as such amounts are determined. Certain pre-production costs relating to long term production and supply contracts have been deferred and will be recognized over the life of the contracts.

Judgments and Uncertainties Revenue is recognized when products have been shipped to the respective customers, title has passed and the price for the product has been determined. Contract accounting involves a judgmental process of estimating the total sales and costs for each contract, which results in the development of estimated profit margin percentages. For each contract with revenue recognized using the percentage of completion method, the amount reported as revenue is determined by calculating cost incurred to date as a percentage of the total expected contract costs to determine the percentage of total contract revenue to be recognized in the current period. Due to the size, duration and nature of many of our contracts, the estimation of total sales and costs through completion is complicated and subject to many variables. Total contract sales estimates are based on negotiated contract prices and quantities, modified by our assumptions regarding contract options, change orders, and price adjustment clauses (such as inflation or index-based clauses). Total contract cost estimates are largely based on negotiated or estimated purchase contract terms, historical performance trends, business base and other economic projections. Factors that influence these estimates include inflationary trends, technical and schedule risk, internal and subcontractor performance trends, business volume assumptions, asset utilization, and anticipated labor agreements. For long-term contracts, revenues and cost estimates are reviewed and revised quarterly at a minimum and adjustments are reflected in the accounting period as such amounts are determined. Pre-production costs are recognized over the expected life of the contract usually based on the Company's progress toward the estimated number of units expected to be delivered under the production or supply contract.

Effect if Actual Results Differ From Assumptions Should market conditions and customer demands dictate changes to our standard shipping terms, the Company may be impacted by longer than typical revenue recognition cycles. The development of expected contract costs and contract profit margin percentages involves procedures and personnel in all areas that provide financial or production information on the status of contracts. Due to the significance of judgment in the estimation process, it is likely that materially different revenue amounts could be recorded if we used different assumptions or if the underlying circumstances were to change. Changes in underlying assumptions/estimates, supplier performance, or circumstances may adversely or positively affect financial performance in future periods. If the combined profit margin for all contracts recognized on the percentage of completion method during 2017 had been estimated to be higher or lower by 1%, it would have increased or decreased revenue and gross profit for the year by approximately $29.8 million. A few of our contracts are expected to be completed in a loss position. Provisions are made currently for estimated losses on uncompleted contracts. A charge to expense for unrecognized portions of pre-production costs could be realized if the Company's estimate of the number of units to be delivered changes or the underlying contract is cancelled.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

In the ordinary course of business, Wabtec is exposed to risks that increases in interest rates may adversely affect funding costs associated with its variable-rate debt. The Company's variable rate debt represents 38% and 36% of total long-term debt at December 31, 2017 and 2016, respectively. On an annual basis, a 1% change in the interest rate for variable rate debt at December 31, 2017 would increase or decrease interest expense by about $7.1 million.

To reduce the impact of interest rate changes on a portion of this variable-rate debt, the Company entered into interest rate swap agreements which effectively converted a portion of the debt from a variable to a fixed-rate borrowing during the term of the swap contracts. Refer to "Financial Derivatives and Hedging Activities" in Note 2 of "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report for additional information regarding interest rate risk.

Foreign Currency Exchange Risk

The Company is subject to certain risks associated with changes in foreign currency exchange rates to the extent our operations are conducted in currencies other than the U.S. dollar. For the year ended December 31, 2017, approximately 34% of Wabtec's net sales were in the United States, 9% in the United Kingdom, 7% in Canada, 6% in France, 5% in China, 5% in Germany, 4% in Australia, 4% in Mexico, 4% in India, 4% in Italy, 2% in Brazil, and 16% in other international locations. (See Note 20 of "Notes in Consolidated Financial Statements" included in Part IV, Item 15 of this report). To reduce the impact of changes in currency exchange rates, the Company has periodically entered into foreign currency forward contracts. Refer to "Financial Derivatives and Hedging Activities" in Note 2 of "Notes to Consolidated Financial Statements" included in Part IV, Item 15 of this report for more information regarding foreign currency exchange risk.

Our market risk exposure is not substantially different from our exposure at December 31, 2016.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial statements and supplementary data are set forth in Item 15 of Part IV hereof.

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

There have been no disagreements with our independent registered public accountants.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Wabtec's principal executive officer and its principal financial officer have evaluated the effectiveness of Wabtec's "disclosure controls and procedures," (as defined in Exchange Act Rule 13a-15(e)) as of December 31, 2017. Based upon their evaluation, the principal executive officer and principal financial officer concluded that Wabtec's disclosure controls and procedures are effective to provide reasonable assurance that information required to be disclosed by Wabtec in the reports filed or submitted by it under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and to provide reasonable assurance that information required to be disclosed by Wabtec in such reports is accumulated and communicated to Wabtec's Management, including its principal executive officer and principal finance officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There was no change in Wabtec's "internal control over financial reporting" (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2017, that has materially affected, or is reasonably likely to materially affect, Wabtec's internal control over financial reporting. Management's annual report on internal control over financial reporting and the attestation report of the registered public accounting firm are included in Part IV, Item 15 of this report.

Management's Report on Internal Control over Financial Reporting

Management's Report on Internal Control Over Financial Reporting appears on page 47 and is incorporated herein by reference.

Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting

Ernst & Young LLP's attestation report on internal control over financial reporting appears on page 50 and is incorporated herein by reference.

Item 9B. OTHER INFORMATION

None.

PART III

Items 10 through 14.

In accordance with the provisions of General Instruction G(3) to Form 10-K, the information required by Item 10 (Directors, Executive Officers and Corporate Governance), Item 11 (Executive Compensation), Item 12 (Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters), Item 13 (Certain Relationships and Related Transactions, and Director Independence) and Item 14 (Principal Accounting Fees and Services) is incorporated herein by reference from the Company's definitive Proxy Statement for its Annual Meeting of Stockholders to be held on May 7, 2018, except for the Equity Compensation Plan Information required by Item 12, which is set forth in the table below. The definitive Proxy Statement will be filed with the Securities and Exchange Commission not later than 120 days after December 31, 2017. Information relating to the executive officers of the Company is set forth in Part I.

Wabtec has adopted a Code of Ethics for Senior Officers which is applicable to our executive officers. As described in Item 1 of this report the Code of Ethics for Senior Officers is posted on our website at *www.wabtec.com*. In the event that we make any amendments to or waivers from this code, we will disclose the amendment or waiver and the reasons for such on our website.

This table provides aggregate information as of December 31, 2017 concerning equity awards under Wabtec's compensation plans and arrangements.

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 shareholders	983,512	$ 40.62	3,192,453
Equity compensation plans not approved by shareholders	—	—	—
Total	983,512	$ 40.62	3,192,453

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The financial statements, financial statement schedules and exhibits listed below are filed as part of this annual report:

	Exhibits	**Filing Method**
2.1	Share Purchase Agreement among Financiere Faiveley S.A., Famille Faiveley Participations Francois Faiveley, Erwan Faiveley, FW Acquisition, LLC and Wabtec Corporation dated as of October 6, 2015	16
2.2	Tender Offer Agreement among Faiveley Transport S.A., FW Acquisition, LLC, and Wabtec Corporation dated as of October 6, 2015	16
2.3	Shareholder's Agreement among Financiere Faiveley S.A., FW Acquisition, LLC, and Wabtec Corporation dated as of October 6, 2015	16
2.4	Amendment No. 1 to Share Purchase Agreement among Mr. Erwan Faiveley, Wabtec France, and Wabtec Corporation dated as of October 24, 2016	17
2.5	Amendment No. 1 to Tender Offer Agreement among Faiveley Transport, S.A., Wabtec France, and Wabtec Corporation dated as of October 24, 2016	17
2.6	Amendment No. 1 to Shareholder's Agreement among Financiere Faiveley S.A., Famille Faiveley Participations, Francois Faiveley, Erwan Faiveley, and Wabtec Corporation dated as of dated as of October 24, 2016	17
3.1	Restated Certificate of Incorporation of the Company dated January 30, 1995, as amended December 31, 2003	9
3.2	Certificate of Amendment of Restated Certificate of Incorporation dated May 14, 2013	11
3.3	Amended By-Laws of the Company, effective May 14, 2014	8
4.1	Indenture, dated August 8, 2013 by and between the Company and Wells Fargo, National Association, as Trustee	12
4.2	First Supplemental Indenture, dated August 8, 2013, by and between the Company and Wells Fargo Bank, National Association, as Trustee	12

4.3	Form of 4.375% Senior Note due 2023 (included in Exhibit 4.2)	12
4.4	Second Supplemental Indenture, dated November 3, 2016, by and among Westinghouse Air Brake Technologies Corporation, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee	19
4.5	Third Supplemental Indenture, dated November 3, 2016, by and among Westinghouse Air Brake Technologies Corporation, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee	19
4.6	Form of 3.450% Senior Note due 2026 (included in Exhibit 4.5)	19
4.7	Fourth Supplemental Indenture, dated February 9, 2017, by and among Westinghouse Air Brake Technologies Corporation, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee	20
4.8	Fifth Supplemental Indenture, dated April 28, 2017, by and among Westinghouse Air Brake Technologies Corporation, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee	21
4.9	Sixth Supplemental Indenture, dated June 21, 2017, by and among Westinghouse Air Brake Technologies Corporation, the subsidiary guarantors named therein and Wells Fargo Bank, National Association, as Trustee.	22
10.1	Agreement of Sale and Purchase of the North American Operations of the Railway Products Group, an operating division of American Standard Inc. (now known as Trane), dated as of 1990 between Rail Acquisition Corp. and American Standard Inc. (only provisions on indemnification are reproduced)	2
10.2	Letter Agreement (undated) between the Company and American Standard Inc. (now known as Trane) on environmental costs and sharing	2
10.3	Purchase Agreement dated as of June 17, 1992 among the Company, Schuller International, Inc., Manville Corporation and European Overseas Corporation (only provisions on indemnification are reproduced)	2
10.4	Westinghouse Air Brake Company 1995 Non-Employee Directors' Fee and Stock Option Plan, as amended and restated*	4
10.5	Westinghouse Air Brake Technologies Corporation 2000 Stock Incentive Plan, as amended *	4
10.6	Employment Agreement with Albert J. Neupaver, dated February 1, 2006 *	3
10.7	Form of Restricted Stock Agreement *	10
10.8	Westinghouse Air Brake Technologies Corporation 2011 Stock Incentive Plan as amended and restated*	5
10.9	Stock Purchase Agreement, by and among the Company, Standard Car Truck Company and Robclif, Inc., dated September 12, 2008	6
10.10	Second Amended and Restated Refinancing Credit Agreement, dated as of June 22, 2016, by and among the Company, Wabtec Cooperatief UA, as borrowers, certain subsidiaries of the Company as guarantors and the lenders party thereto and PNC Bank, National Association, as Administrative Agent, PNC Capital Markets LLC, Merrill Lynch, Pierce, Fenner & Smith Inc., JPMorgan Chase Bank, N.A., HSBC Bank, USA, National Association and Société Générale, as Joint Lead Arrangers and Joint Bookrunners, Bank of America, National Association and JPMorgan Chase Bank, N.A., as Co-Syndication Agents, and HSBC Bank USA, National Association and Société Générale, as Co-Documentation Agents.	14
10.11	First Amendment to Second Amended and Restated Refinancing Credit Agreement, dated as of April 19, 2017, by and among the Company, Wabtec Cooperatief UA, as a borrower, certain subsidiaries of the Company as guarantors, the lenders party thereto and PNC Bank, National Association, as Administrative Agent.	21
10.12	Second Amendment to Second Amended and Restated Refinancing Credit Agreement, dated as of October 11, 2017, by and among the Company, Wabtec Cooperatief UA, as a borrower, certain subsidiaries of the Company as guarantors, the lenders party thereto and PNC Bank, National Association, as Administrative Agent.	23
10.12	Form of Employment Continuation Agreement entered into by the Company with Albert J. Neupaver, Raymond T. Betler, David L. DeNinno, Patrick D. Dugan, Scott E. Wahlstrom, Michael E. Fetsko, Timothy R. Wesley and John A Mastalerz Jr.*	7
10.13	Amended and Restated Employment Agreement with Stephane Rambaud-Measson dated October 24, 2016*	20
10.14	Amended and Restated Employment Agreement with Guillaume Bouhours dated October 24, 2016*	20
10.15	Wabtec Corporation Deferred Compensation Plan for Executive Officers and Directors as adopted December 10, 2009 *	10
10.16	Form of Agreement for Nonstatutory Stock Option under the 1995 Non-Employee Directors' Fee and Stock Option Plan, as amended and restated*	10

10.17	Form of Agreement for Nonstatutory Stock Options under 2000 Stock Incentive Plan, as amended *	10
10.18	Form of Agreement for Nonstatutory Stock Options under 2011 Stock Incentive Plan as amended and restated*	10
21.0	List of subsidiaries of the Company	1
23.1	Consent of Ernst & Young LLP	1
23.2	Consent of Independent Accountants	1
31.1	Rule 13a-14(a)/15d-14(a) Certifications	1
31.2	Rule 13a-14(a)/15d-14(a) Certifications	1
32.1	Section 1350 Certifications	1
101.INS	XBRL Instance Document.	1
101.SCH	XBRL Taxonomy Extension Calculation Linkbase Document	1
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	1
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	1
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	1
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	1

1 Filed herewith.

2 Filed as an exhibit to the Company's Registration Statement on Form S-1 (File No. 33-90866).

3 Filed as an exhibit to the Company's Quarterly Report on Form 10-Q (File No. 033-90866) for the period ended March 31, 2006.

4 Filed as an Annex to the Company's Schedule 14A Proxy Statement (File No. 1-13782) filed on April 13, 2006.

5 Filed as an Annex to the Company's Schedule 14A Proxy Statement (File No. 1-13782) filed on March 31, 2011.

6 Filed as an exhibit to the Company's Quarterly Report on Form 10-Q (File No. 1-13782) for the period ended September 30, 2008.

7 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782) dated July 2, 2009.

8 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated May 19, 2014.

9 Filed as an exhibit to the Company's Annual Report on Form 10-K (File No. 1-13782), dated February 25, 2011.

10 Filed as an exhibit to the Company's Annual Report on Form 10-K (File No. 1-13782), dated February 22, 2013.

11 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated May 15, 2013.

12 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated August 8, 2013.

13 Filed as an exhibit to the Company’s Annual Report on Form 10-K (File No. 1-13782), dated February 21, 2014.

14 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated June 24, 2016.

15 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated July 30, 2015.

16 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated October 6, 2015.

17 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated October 26, 2016.

18 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated November 1, 2016.

19 Filed as an exhibit to the Company's Current Report on Form 8-K (File No. 1-13782), dated November 3, 2016.

20 Filed as an exhibit to the Company’s Annual Report on Form 10-K (File No. 1-13782), dated February 28, 2017.

21 Filed as an exhibit to the Company’s Quarterly Report on Form 10-Q (File No. 1-13782) for the period ended March 31, 2017.

22 Filed as an exhibit to the Company’s Registration Statement on Form S-4 (File No. 333-219354).

23 Filed as an exhibit to the Company’s Quarterly Report on Form 10-Q (File No. 1-13782) for the period ended September 30, 2017.

* Management contract or compensatory plan.

MANAGEMENT'S REPORTS TO WABTEC SHAREHOLDERS

Management's Report on Financial Statements and Practices

The accompanying consolidated financial statements of Westinghouse Air Brake Technologies Corporation and subsidiaries (the "Company") were prepared by Management, which is responsible for their integrity and objectivity. The statements were prepared in accordance with U.S. generally accepted accounting principles and include amounts that are based on Management's best judgments and estimates. The other financial information included in the 10-K is consistent with that in the financial statements.

Management also recognizes its responsibility for conducting the Company's affairs according to the highest standards of personal and corporate conduct. This responsibility is characterized and reflected in key policy statements issued from time to time regarding, among other things, conduct of its business activities within the laws of host countries in which the Company operates and potentially conflicting outside business interests of its employees. The Company maintains a systematic program to assess compliance with these policies.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. In order to evaluate the effectiveness of internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, Management has conducted an assessment, including testing, using the criteria in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (COSO). The Company's system of internal control over financial reporting is 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 standards. 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.

Management has excluded Aero Transportation Products ("ATP"), Thermal Transfer Corporation ("TTC"), Semvac Group ("Semvac"), AM General Contractor ("AM General"), and Melett Limited ("Melett") from its assessment of internal controls over financial reporting as of December 31, 2017 because the Company acquired ATP effective March 13, 2017, TTC effective April 5, 2017, Semvac effective April 28, 2017, AM General effective October 2, 2017, and Melett effective December 4, 2017. ATP, TTC, Semvac, AM General, and Melett are subsidiaries whose total assets represents 1.1%, 0.6%, 0.3%, 0.9%, and 1.5%, respectively, and whose customer revenues represents 0.9%, 0.4%, 0.3%, 0.2%, and 0.1%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2017.

Based on its assessment, Management has concluded that the Company maintained effective internal control over financial reporting as of December 31, 2017, based on criteria in Internal Control-Integrated Framework issued by the COSO. The effectiveness of the Company's internal control over financial reporting as of December 31, 2017, has been audited by Ernst & Young LLP, independent registered public accounting firm, as stated in their report which is included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Westinghouse Air Brake Technologies Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Westinghouse Air Brake Technologies Corporation (the Company) as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and schedule as listed in the Index at Item 15.(2) (collectively referred to as the “consolidated financial statements”). In our opinion, based on our audits and the report of other auditors, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017 in conformity with U.S. generally accepted accounting principles.

We did not audit the pre-acquisition historical basis consolidated financial statements of Faiveley Transport S.A., a consolidated subsidiary, which statements reflect total assets constituting 25.9% in 2016, and total revenues constituting 3.8% in 2016 of the related consolidated totals. Those statements were audited by other auditors whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for Faiveley Transport S.A., is based solely on the report of the other auditors. We audited the adjustments necessary to convert the pre-acquisition historical amounts included for Faiveley Transport S.A. to the basis reflected in the Company’s 2016 consolidated financial statements.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 26, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

/s/ ERNST & YOUNG LLP

We have served as the Company's auditor since 2002.

Pittsburgh, Pennsylvania
February 26, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Management Board of Faiveley Transport

In our opinion, the consolidated balance sheets and the related consolidated statement of income, comprehensive income, shareholders' equity and cash flows present fairly, in all material respects, the financial position of Faiveley Transport and its subsidiaries as of December 31, 2016 and November 30, 2016, and the results of their operations and their cash flows for the period from November 30, 2016 to December 31, 2016 (not presented separately herein), in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion. As discussed in Note 3, the company has not applied push down accounting for its acquisition by Wabtec.

PricewaterhouseCoopers Audit

/s/ Philippe Vincent
Partner

Neuilly-sur-Seine, France
February 23, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Westinghouse Air Brake Technologies Corporation

Opinion on Internal Control over Financial Reporting

We have audited Westinghouse Air Brake Technologies Corporation's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Westinghouse Air Brake Technologies Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Aero Transportation Products ("ATP"), Thermal Transfer Corporation ("TTC"), Semvac Group ("Semvac"), AM General Contractor ("AM General"), and Melett Limited ("Melett"), which are included in the 2017 consolidated financial statements of the Company and constituted 1.1%, 0.6%, 0.3%, 0.9%, and 1.5% of total assets, respectively, as of December 31, 2017 and 0.9%, 0.4%, 0.3%, 0.2%, and 0.1% of revenues, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of ATP, TTC, Semvac, AM General, and Melett.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, the related consolidated statements of comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and schedule as listed in the Index at Item 15.(2) and our report dated February 26, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP

Pittsburgh, Pennsylvania

February 26, 2018

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION
CONSOLIDATED BALANCE SHEETS

In thousands, except shares and par value	December 31, 2017	December 31, 2016
Assets		
Current Assets		
Cash and cash equivalents	$ 233,401	$ 398,484
Accounts receivable	800,619	667,596
Unbilled accounts receivable	366,168	274,912
Inventories	742,634	658,510
Deposits in escrow	—	744,748
Other assets	122,291	123,381
Total current assets	2,265,113	2,867,631
Property, plant and equipment	1,026,046	912,230
Accumulated depreciation	(452,074)	(393,854)
Property, plant and equipment, net	573,972	518,376
Other Assets		
Goodwill	2,460,103	2,078,765
Other intangibles, net	1,204,432	1,053,860
Other noncurrent assets	76,360	62,386
Total other assets	3,740,895	3,195,011
Total Assets	$ 6,579,980	$ 6,581,018
Liabilities and Shareholders' Equity		
Current Liabilities		
Accounts payable	$ 552,525	$ 530,211
Customer deposits	369,716	256,591
Accrued compensation	164,210	145,324
Accrued warranty	137,542	123,190
Current portion of long-term debt	47,225	129,809
Other accrued liabilities	302,112	261,514
Total current liabilities	1,573,330	1,446,639
Long-term debt	1,823,303	1,762,967
Accrued postretirement and pension benefits	103,734	110,597
Deferred income taxes	175,902	245,680
Accrued warranty	15,521	15,802
Other long-term liabilities	59,658	22,508
Total liabilities	3,751,448	3,604,193
Commitment and Contingencies (Note 19)		
Equity		
Preferred stock, 1,000,000 shares authorized, no shares issued	—	—
Common stock, $.01 par value; 200,000,000 shares authorized: 132,349,534 shares issued and 96,034,352 and 95,425,432 outstanding at December 31, 2017 and December 31, 2016, respectively	1,323	1,323
Additional paid-in capital	906,616	869,951
Treasury stock, at cost, 36,315,182 and 36,924,102 shares, at December 31, 2017 and December 31, 2016, respectively	(827,379)	(838,950)
Retained earnings	2,773,300	2,553,258
Accumulated other comprehensive loss	(44,992)	(379,605)
Total Westinghouse Air Brake Technologies Corporation shareholders' equity	2,808,868	2,205,977
Noncontrolling interest	19,664	770,848
Total equity	2,828,532	2,976,825
Total Liabilities and Equity	$ 6,579,980	$ 6,581,018

The accompanying notes are an integral part of these statements.

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION

CONSOLIDATED STATEMENTS OF INCOME

In thousands, except per share data	Year Ended December 31, 2017	2016	2015
Net sales	$ 3,881,756	$ 2,931,188	$ 3,307,998
Cost of sales	(2,816,443)	(2,006,949)	(2,260,182)
Gross profit	1,065,313	924,239	1,047,816
Selling, general and administrative expenses	(511,898)	(371,805)	(347,373)
Engineering expenses	(95,166)	(71,375)	(71,213)
Amortization expense	(36,516)	(22,698)	(21,663)
Total operating expenses	(643,580)	(465,878)	(440,249)
Income from operations	421,733	458,361	607,567
Other income and expenses			
Interest expense, net	(68,704)	(42,561)	(16,888)
Other (expense) income, net	(966)	(2,963)	(5,311)
Income from operations before income taxes	352,063	412,837	585,368
Income tax expense	(89,773)	(99,433)	(186,740)
Net income	262,290	313,404	398,628
Less: Net income attributable to noncontrolling interest	(29)	(8,517)	—
Net income attributable to Wabtec shareholders	$ 262,261	$ 304,887	$ 398,628
Earnings Per Common Share			
Basic			
Net income attributable to Wabtec shareholders	$ 2.74	$ 3.37	$ 4.14
Diluted			
Net income attributable to Wabtec shareholders	$ 2.72	$ 3.34	$ 4.10
Weighted average shares outstanding			
Basic	95,453	90,359	96,074
Diluted	96,125	91,141	97,006

The accompanying notes are an integral part of these statements.

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
In thousands, except per share data	**2017**	**2016**	**2015**
Net income attributable to Wabtec shareholders	$ 262,261	$ 304,887	$ 398,628
Foreign currency translation gain (loss)	326,096	(93,684)	(132,899)
Unrealized gain (loss) on derivative contracts	9,799	305	(1,202)
Unrealized gain (loss) on pension benefit plans and post-retirement benefit plans	2,845	(12,021)	26,689
Other comprehensive gain (loss) before tax	338,740	(105,400)	(107,412)
Income tax (expense) benefit related to components of other comprehensive loss	(4,127)	2,514	(9,821)
Other comprehensive income (loss), net of tax	334,613	(102,886)	(117,233)
Comprehensive income attributable to Wabtec shareholders	$ 596,874	$ 202,001	$ 281,395

The accompanying notes are an integral part of these statements.

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

	December 31,		
	2017	2016	2015
In thousands, except per share data			
Operating Activities			
Net income	$ 262,290	$ 313,404	$ 398,628
Adjustments to reconcile net income to cash provided by operations:			
Depreciation and amortization	103,248	69,795	64,734
Stock-based compensation expense	21,287	20,813	26,019
Deferred income taxes	(67,423)	(10,228)	4,981
Loss on disposal of property, plant and equipment	1,907	232	587
Changes in operating assets and liabilities, net of acquisitions			
Accounts receivable and unbilled accounts receivable	(68,676)	19,728	21,500
Inventories	(8,955)	45,340	20,147
Accounts payable	(91,722)	(18,932)	(76,650)
Accrued income taxes	47,644	(11,759)	21,740
Accrued liabilities and customer deposits	(18,891)	(11,338)	(14,837)
Other assets and liabilities	8,102	33,475	(16,005)
Net cash provided by operating activities	188,811	450,530	450,844
Investing Activities			
Purchase of property, plant and equipment	(89,466)	(50,216)	(49,428)
Proceeds from disposal of property, plant and equipment	1,291	363	1,784
Acquisitions of business, net of cash acquired	(921,537)	(183,113)	(129,550)
Deposit in escrow	733,983	(542,099)	(202,942)
Net cash used for investing activities	(275,729)	(775,065)	(380,136)
Financing Activities			
Proceeds from debt	1,216,740	1,875,000	787,400
Payments of debt	(1,269,537)	(1,102,748)	(612,680)
Stock re-purchase	—	(212,176)	(387,787)
Proceeds from exercise of stock options and other benefit plans	4,428	1,983	3,097
Payment of income tax withholding on share-based compensation	(6,844)	(6,658)	(14,565)
Cash dividends ($0.44, $0.36 and $0.28 per share for the years ended December 31, 2017, 2016 and 2015)	(42,218)	(32,430)	(26,963)
Net cash (used for) provided by financing activities	(97,431)	522,971	(251,498)
Effect of changes in currency exchange rates	19,266	(26,143)	(18,868)
(Decrease) increase in cash	(165,083)	172,293	(199,658)
Cash, beginning of year	398,484	226,191	425,849
Cash, end of year	$ 233,401	$ 398,484	$ 226,191

The accompanying notes are an integral part of these statements.

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

In thousands, except share and per share data	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Treasury Stock Shares	Treasury Stock Amount	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest	Total
Balance, December 31, 2014	132,349,534	$ 1,323	$ 448,531	(36,075,139)	$ (392,262)	$ 1,909,136	$ (159,486)	$ 1,732	$ 1,808,974
Cash dividends ($0.28 dividend per share)	—	—	—	—	—	(26,963)	—	—	(26,963)
Proceeds from treasury stock issued from the exercise of stock									
options and other benefit plans, net of tax	—	—	(2,918)	450,738	4,925	—	—	—	2,007
Stock based compensation	—	—	23,713	—	—	—	—	—	23,713
Net income	—	—	—	—	—	398,628	—	—	398,628
Translation adjustment	—	—	—	—	—	—	(132,899)	—	(132,899)
Unrealized loss on foreign exchange contracts, net of $14 tax	—	—	—	—	—	—	(66)	—	(66)
Unrealized loss on interest rate swap contracts, net of $444 tax	—	—	—	—	—	—	(678)	—	(678)
Change in pension and post-retirement benefit plans, net of $10,279 tax	—	—	—	—	—	—	16,410	—	16,410
Stock re-purchase	—	—	—	(4,889,027)	(387,787)	—	—	—	(387,787)
Balance, December 31, 2015	132,349,534	1,323	469,326	(40,513,428)	(775,124)	2,280,801	(276,719)	1,732	1,701,339
Cash dividends ($0.36 dividend per share)	—	—	—	—	—	(32,430)	—	—	(32,430)
Proceeds from treasury stock issued from the exercise of stock									
options and other benefit plans, net of tax	—	—	(8,490)	328,245	5,038	—	—	—	(3,452)
Stock based compensation	—	—	17,748	—	—	—	—	—	17,748
Non-controlling interests associated with Faiveley Transport Acquisition	—	—	—	—	—	—	—	760,599	760,599
Net income	—	—	—	—	—	304,887	—	8,517	313,404
Translation adjustment	—	—	—	—	—	—	(93,684)	—	(93,684)
Unrealized loss on foreign exchange contracts, net of $45 tax	—	—	—	—	—	—	(324)	—	(324)
Unrealized gain on interest rate swap contracts, net of $230 tax	—	—	—	—	—	—	354	—	354
Change in pension and post-retirement benefit plans, net of $2,790 tax	—	—	—	—	—	—	(9,232)	—	(9,232)
Stock issued for Faiveley Transport Acquisition	—	—	391,367	6,307,489	143,312	—	—	—	534,679
Stock re-purchase	—	—	—	(3,046,408)	(212,176)	—	—	—	(212,176)
Balance, December 31, 2016	132,349,534	1,323	869,951	(36,924,102)	(838,950)	2,553,258	(379,605)	770,848	2,976,825
Cash dividends ($0.44 dividend per share)	—	—	—	—	—	(42,218)	—	—	(42,218)
Proceeds from treasury stock issued from the exercise of stock									
options and other benefit plans, net of tax	—	—	(7,361)	608,920	4,945	—	—	—	(2,416)
Stock based compensation	—	—	16,650	—	—	—	—	—	16,650
Acquisition of Faiveley Transport noncontrolling interest	—	—	8,931	—	—	—	—	(751,213)	(742,282)
Net income	—	—	—	—	—	262,261	—	29	262,290
Translation adjustment	—	—	—	—	—	—	326,095	—	326,095
Unrealized gain on foreign exchange contracts, net of $1,763 tax	—	—	—	—	—	—	2,282	—	2,282
Unrealized gain on interest rate swap contracts, net of $1,079 tax	—	—	—	—	—	—	4,689	—	4,689
Change in pension and post-retirement benefit plans, net of $1,300 tax	—	—	—	—	—	—	1,546	—	1,546
Stock issued for Faiveley Transport Acquisition	—	—	18,445	—	6,626	—	—	—	25,071
Balance, December 31, 2017	132,349,534	$ 1,323	$ 906,616	(36,315,182)	$ (827,379)	$ 2,773,301	$ (44,993)	$ 19,664	$ 2,828,532

The accompanying notes are an integral part of these statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BUSINESS

Wabtec is one of the world's largest providers of value-added, technology-based equipment, systems and services for the global passenger transit and freight rail industries. Our highly engineered products, which are intended to enhance safety, improve productivity and reduce maintenance costs for customers, can be found on most locomotives, freight cars, passenger transit cars and buses around the world. Our products enhance safety, improve productivity and reduce maintenance costs for customers, and many of our core products and services are essential in the safe and efficient operation of freight rail and passenger transit vehicles. Wabtec is a global company with operations in 31 countries and our products can be found in more than 100 countries throughout the world. In 2017, about 66% of the Company's revenues came from customers outside the U.S.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation The consolidated financial statements include the accounts of the Company and all subsidiaries that it controls. For consolidated subsidiaries in which the Company's ownership is less than 100%, the outside shareholders' interests are shown as noncontrolling interests. These statements have been prepared in accordance with U.S. generally accepted accounting principles. Sales between subsidiaries are billed at prices consistent with sales to third parties and are eliminated in consolidation.

Cash Equivalents Cash equivalents are highly liquid investments purchased with an original maturity of three months or less.

Allowance for Doubtful Accounts The allowance for doubtful accounts receivable reflects our best estimate of probable losses inherent in our receivable portfolio determined on the basis of historical experience, specific allowances for known troubled accounts and other currently available evidence. The allowance for doubtful accounts was $12.3 million and $7.3 million as of December 31, 2017 and 2016, respectively.

Inventories Inventories are stated at the lower of cost or market. Cost is determined under the first-in, first-out (FIFO) method. Inventory costs include material, labor and overhead.

Property, Plant and Equipment Property, plant and equipment additions are stated at cost. Expenditures for renewals and improvements are capitalized. Expenditures for ordinary maintenance and repairs are expensed as incurred. The Company computes book depreciation principally on the straight-line method. Accelerated depreciation methods are utilized for income tax purposes.

Leasing Arrangements The Company conducts a portion of its operations from leased facilities and finances certain equipment purchases through lease agreements. In those cases in which the lease term approximates the useful life of the leased asset or the lease meets certain other prerequisites, the leasing arrangement is classified as a capital lease. The remaining arrangements are treated as operating leases.

Goodwill and Intangible Assets Goodwill and other intangible assets with indefinite lives are not amortized. Other intangibles (with definite lives) are amortized on a straight-line basis over their estimated economic lives. Amortizable intangible assets are reviewed for impairment when indicators of impairment are present. The Company tests goodwill and indefinite-lived intangible assets for impairment at the reporting unit level and at least annually. The Company performs its annual impairment test during the fourth quarter after the annual forecasting process is completed, and also tests for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Periodically, Management of the Company assesses whether or not an indicator of impairment is present that would necessitate an impairment analysis be performed.

For 2017, the Company opted to proceed directly to the two-step quantitative impairment test for all reporting units with goodwill. In the first step of the quantitative assessment, our assets and liabilities, including existing goodwill and other intangible assets, are assigned to the identified reporting units to determine the carrying value of the reporting units. The income approach and the market approach are weighted at 50% and 50%, respectively, in arriving at fair value. The discounted cash flow model requires several assumptions including future sales growth, EBIT (earnings before interest and taxes) margins and capital expenditures for the reporting units. The discounted cash flow model also requires the use of a discount rate and a terminal revenue growth rate (the revenue growth rate for the period beyond the years forecasted by the reporting units), as well as projections of future operating margins. The market approach requires several assumptions including EBITDA (earnings before interest, taxes, depreciation and amortization) multiples for comparable companies that operate in the same markets as the Company's reporting units. The estimated fair value of all reporting units was substantially in excess of its respective carrying value, which resulted in a conclusion that no impairment existed.

Additionally, the Company proceeded directly to the quantitative impairment test for some trade names with indefinite lives. The fair value of all trade names subject to the quantitative impairment test exceeded its respective carrying value, resulting in a conclusion that no impairment existed. For trade names not subject to the quantitative testing, the Company opted to perform a qualitative trade name impairment assessment and determined from the qualitative assessment that it was not more likely than not that the estimated fair values of the trade names were less than their carrying values; therefore, no further analysis was required. In assessing the qualitative factors to determine whether it is more likely than not that the fair value of a trade name is less than its carrying amount, we assess relevant events and circumstances that may impact the fair value and the carrying amount of the trade name. The identification of relevant events and circumstances and how these may impact a trade name's fair value or carrying amount involve significant judgments and assumptions. The judgment and assumptions include the identification of macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, Wabtec specific events, share price trends and making the assessment on whether each relevant factor will impact the impairment test positively or negatively and the magnitude of any such impact.

Warranty Costs Warranty costs are accrued based on Management's estimates of repair or upgrade costs per unit and historical experience. Warranty expense was \$50.4 million, \$28.9 million and \$35.4 million for 2017, 2016 and 2015, respectively. Accrued warranty was \$153.1 million and \$139.0 million at December 31, 2017 and 2016, respectively.

Income Taxes Income taxes are accounted for under the liability method. Deferred tax assets and liabilities are determined based on differences between financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates and laws. The provision for income taxes includes federal, state and foreign income taxes.

Stock-Based Compensation The Company recognizes compensation expense for stock-based compensation based on the grant date fair value amortized ratably over the requisite service period following the date of grant.

Financial Derivatives and Hedging Activities The Company has entered into foreign currency forward contracts to reduce the impact of changes in currency exchange rates. Foreign currency forward contracts are agreements with a counterparty to exchange two distinct currencies at a set exchange rate for delivery on a set date at some point in the future. There is no exchange of funds until the delivery date. At the delivery date, the Company can either take delivery of the currency or settle on a net basis. For further information regarding the foreign currency forward contracts, see Footnote 17.

To reduce the impact of interest rate changes on a portion of its variable-rate debt, the Company has entered into an interest rate swap agreement with a notional value of \$150 million. As of December 31, 2017, the Company has recorded a current liability of \$1.2 million and a corresponding offset in accumulated other comprehensive loss of \$0.7 million, net of tax, related to these agreements. For further information regarding the interest rate swap agreement, see Footnote 17.

Foreign Currency Translation Assets and liabilities of foreign subsidiaries, except for the Company's Mexican operations whose functional currency is the U.S. Dollar, are translated at the rate of exchange in effect on the balance sheet date while income and expenses are translated at the average rates of exchange prevailing during the period. Foreign currency gains and losses resulting from transactions, and the translation of financial statements are recorded in the Company's consolidated financial statements based upon the provisions of Accounting Standards Codification ("ASC") 830, "Foreign Currency Matters." The effects of currency exchange rate changes on intercompany transactions and balances of a long-term investment nature are accumulated and carried as a component of accumulated other comprehensive loss. The effects of currency exchange rate changes on intercompany transactions that are denominated in a currency other than an entity's functional currency are charged or credited to earnings. Foreign exchange transaction losses recognized in other (expense) income, net were \$6.6 million, \$4.0 million and \$4.7 million for 2017, 2016 and 2015, respectively.

Noncontrolling Interests In accordance with ASC 810, the Company has classified noncontrolling interests as equity on our condensed consolidated balance sheets as of December 31, 2017 and 2016. Net income attributable to noncontrolling interests was \$8.5 million for the year ended December 31, 2016. Net income attributable to noncontrolling interest was not material for the years ended December 31, 2017 and 2015. Other comprehensive income attributable to noncontrolling interests for the years ended December 31, 2017, 2016 and 2015 was not material.

Revenue Recognition Revenue is recognized in accordance with ASC 605 "Revenue Recognition," The Company recognizes revenue when the following criteria are met: 1) persuasive evidence of an arrangement exists; 2) delivery has occurred; 3) an established sales price has been set with the customer; 4) collection of the sale revenue from the customer is reasonably assured; and 5) no contingencies exist. Delivery is considered to have occurred when the customer assumes the risk and rewards of ownership. The Company estimates and records provisions for quantity rebates and sales returns and allowances as an offset to revenue in the same period the related revenue is recognized, based upon its experience. These items are included as a reduction in deriving net sales.

In general, the Company recognizes revenues on long-term contracts based on the percentage of completion method of accounting. The units-of-delivery method or other input-based or output-based measures, as appropriate, are used to measure the progress toward completion of individual contracts. Contract revenues and cost estimates are reviewed and revised quarterly at a minimum and adjustments are reflected in the accounting period as such amounts are determined. Provisions are made currently for estimated losses on uncompleted contracts. Unbilled accounts receivables were $366.2 million and $274.9 million, customer deposits were $369.7 million and $256.6 million, and provisions for loss contracts were $94.0 million and $60.5 million at December 31, 2017 and 2016, respectively.

Certain pre-production costs relating to long-term production and supply contracts have been deferred and will be recognized over the life of the contracts. Deferred pre-production costs were $20.2 million and $29.4 million at December 31, 2017 and 2016, respectively.

Significant Customers and Concentrations of Credit Risk The Company's trade receivables are from rail and transit industry original equipment manufacturers, Class I railroads, railroad carriers and commercial companies that utilize rail cars in their operations, such as utility and chemical companies. No one customer accounted for more than 10% of the Company's consolidated net sales in 2017, 2016 or 2015.

Shipping and Handling Fees and Costs All fees billed to the customer for shipping and handling are classified as a component of net revenues. All costs associated with shipping and handling are classified as a component of cost of sales.

Research and Development Research and development costs are charged to expense as incurred. For the years ended December 31, 2017, 2016 and 2015, the Company incurred costs of approximately $95.2 million, $71.4 million, and $71.2 million, respectively.

Earnings Per Share Basic and diluted earnings per common share is computed in accordance with ASC 260 "Earnings Per Share." Unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and included in the computation of earnings per share pursuant to the two-class method included in ASC 260-10-55. (See Note 11 "Earnings Per Share" included herein)

Reclassifications Certain prior year amounts have been reclassified, where necessary, to conform to the current year presentation. Refer to Recently Adopted Accounting Pronouncements below.

Use of Estimates The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Actual amounts could differ from the estimates. On an ongoing basis, Management reviews its estimates based on currently available information. Changes in facts and circumstances may result in revised estimates.

Recently Issued Accounting Pronouncements In February 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2018-02 "Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". The amendments in this update address certain stranded income tax effects in accumulated other comprehensive income ("AOCI") resulting from the Tax Cuts and Jobs Act ("TCJA"). Current guidance requires the effect of a change in tax laws or rates on deferred tax balances to be reported in income from continuing operations in the accounting period that includes the period of enactment, even if the related income tax effects were originally charged or credited directly to AOCI. The amount of the reclassification would include the effect of the change in the U.S. federal corporate income tax rate on the gross deferred tax amounts and related valuation allowances, if any, at the date of the enactment of TCJA related to items in AOCI. The updated guidance is effective for reporting periods beginning after December 15, 2018 and is to be applied retrospectively to each period in which the effect of the TCJA related to items remaining in AOCI are recognized or at the beginning of the period of adoption. Early adoption is permitted. The Company is currently evaluating the potential impact of adopting this guidance on its consolidated financial statements.

In March 2017, the FASB issued ASU No. 2017-07 "Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost". The amendments in this update require the service cost component of net benefit costs to be reported in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit costs are required to be presented in the income statement separately from the service cost component and outside income from operations. This update also allows the service cost component to be eligible for capitalization when applicable. The ASU is effective for public companies in the fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption was permitted as of the beginning of an annual period. The amendments should be applied retrospectively for the presentation of the service cost component and the other components of net periodic pension cost and net periodic postretirement benefit cost in the income statement and prospectively for the capitalization of the service cost component of net periodic pension cost and net periodic postretirement benefit in assets. The Company does not expect the adoption of this guidance in 2018 to have a material impact on the Company's financial statements.

In January 2017, the FASB issued ASU No. 2017-04 "Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment". The amendments in this update eliminate the requirement to perform Step 2 of the goodwill impairment test. Instead, an entity should perform a goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value up to the carrying amount of the goodwill. The ASU is effective for public companies in the fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted. The impact of adopting this guidance could result in a change in the overall conclusion as to whether or not a reporting units' goodwill is impaired and the amount of an impairment charge recognized in the event a reporting units' carrying value exceeds its fair value. All of the Company's reporting units had fair values that were greater than the carrying value as of the Company's last quantitative goodwill impairment test, which was performed as of October 1, 2017.

In November 2016, the FASB issued ASU No. 2016-18 "Statement of Cash Flows (Topic 230): Restricted Cash". The amendments in this update require a statement of cash flows to explain the change during the period in total cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. 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 ASU is effective for public companies in the fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. The Company does not expect the adoption of this guidance in 2018 to have a material impact on the Company's financial statements.

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 814)" which requires lessees to recognize a right of use asset and lease liability on the balance sheet for all leases with terms longer than 12 months. For leases with terms less than 12 months, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize a right of use asset and lease liability. The ASU is effective for public companies in the fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company is currently evaluating the potential impact of adopting this guidance on its consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-9, “Revenue from Contract with Customers.” The ASU will supersede most of the existing revenue recognition requirements in U.S. GAAP and will require entities to recognize revenue at an amount that reflects the consideration to which the Company expects to be entitled in exchange for transferring goods or services to a customer. The new standard also requires significantly expanded disclosures regarding the qualitative and quantitative information of an entity’s nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The Board voted to propose that the standard would take effect for reporting periods beginning after December 15, 2017 and that early adoption would be allowed as of the original effective date. The impact to results is not anticipated to be material because the analysis of the Company's current long-term contracts under the new revenue recognition standard supports the recognition of revenue over time under the cost-to-cost method for substantially all of our long-term contracts, which is consistent with our current revenue recognition model. The Company plans to adopt this accounting standard update using the modified retrospective method, with the cumulative effect of initially applying this update recognized in the first reporting period of 2018. The Company has evaluated new disclosure requirements and is implementing appropriate changes to its business processes and controls to support disclosure under the new guidance.

Recently Adopted Accounting Pronouncements In March 2016, the FASB issued ASU No. 2016-09, “Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting”. The ASU simplifies several aspects for the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The ASU became effective for public companies during interim and annual reporting periods beginning after December 15, 2016. In accordance with this update, the Company began recognizing all excess tax deficiencies and tax benefits from share-based payment awards as a benefit or expense to income tax in the income statement. This update has been adopted prospectively in accordance with the ASU and the impact of adoption on the income statement was not material. Additionally, in accordance with this update, the Company began classifying excess income tax benefits from exercise of stock options as an operating activity on the consolidated statement of cash flows. The Company elected to adopt this amendment retrospectively and the impact of the adoption on operating and financing cash flows was not material.

3. ACQUISITIONS

Faiveley Transport

On November 30, 2016, the Company acquired majority ownership of Faiveley Transport S.A. (“Faiveley Transport”) under the terms of a Share Purchase Agreement (“Share Purchase Agreement”). Faiveley Transport is a leading global provider of value-added, integrated systems and services for the railway industry with annual sales of about $1.2 billion and more than 5,700 employees in 24 countries. Faiveley Transport supplies railway manufacturers, operators and maintenance providers with a range of value-added, technology-based systems and services in Energy & Comfort (air conditioning, power collectors and converters, and passenger information), Access & Mobility (passenger access systems and platform doors), and Brakes and Safety (braking systems and couplers). The transaction was structured as a step acquisition as follows:

- On November 30, 2016, the Company acquired majority ownership of Faiveley Transport, after completing the purchase of the Faiveley family’s ownership interest under the terms of the Share Purchase Agreement, which directed the Company to pay €100 per share of Faiveley Transport, payable between 25% and 45% in cash at the election of those shareholders and the remainder payable in Wabtec stock. The Faiveley family’s ownership interest acquired by the Company represented approximately 51% of outstanding share capital and approximately 49% of the outstanding voting shares of Faiveley Transport. Upon completion of the share purchase under the Share Purchase Agreement, Wabtec commenced a tender offer for the remaining publicly traded Faiveley Transport shares. The public shareholders had the option to elect to receive €100 per share in cash or 1.1538 shares of Wabtec common stock per share of Faiveley Transport. The common stock portion of the consideration was subject to a cap on issuance of Wabtec common shares that was equivalent to the rates of cash and stock elected by the 51% owners.
- On February 3, 2017, the initial cash tender offer was closed, which resulted in the Company acquiring approximately 27% of additional outstanding share capital and voting rights of Faiveley Transport for approximately $411.8 million in cash and $25.2 million in Wabtec stock. After the initial cash tender offer, the Company owned approximately 78% of outstanding share capital and 76% of voting rights.
- On March 6, 2017, the final cash tender offer was closed, which resulted in the Company acquiring approximately 21% of additional outstanding share capital and 22% of additional outstanding voting rights of Faiveley Transport for approximately $303.2 million in cash and $0.3 million in Wabtec stock. After the final cash tender offer, the Company owned approximately 99% of the share capital and 98% of the voting rights of Faiveley Transport.
- On March 21, 2017, a mandatory squeeze-out procedure was finalized, which resulted in the Company acquiring the Faiveley Transport shares not tendered in the offers for approximately $17.5 million in cash. This resulted in the Company owning 100% of the share capital and voting rights of Faiveley Transport.

As of November 30, 2016, the date the Company acquired 51% of the share capital and 49% of the voting interest in Faiveley Transport, Faiveley Transport was consolidated under the variable interest entity model as the Company concluded that it was the primary beneficiary of Faiveley Transport as it then possessed the power to direct the activities of Faiveley Transport that most significantly impact its economic performance and it then possessed the obligation and right to absorb losses and benefits from Faiveley Transport.

The purchase price paid for 100% ownership of Faiveley Transport was $1,507 million. The $744.7 million included as deposits in escrow on the consolidated balance sheet at December 31, 2016 was cash designated for use as consideration for the tender offers.

The fair values of the assets acquired and liabilities assumed were determined using the income, cost and market approaches. The fair value measurements were primarily based on significant inputs that are not observable in the market and are considered Level 3. The December 31, 2016 consolidated balance sheet includes the assets and liabilities of Faiveley Transport, which have been measured at fair value. The fair value of the noncontrolling interest was preliminarily determined using the market price of Faiveley Transport’s publicly traded common stock multiplied by the number of publicly traded common shares outstanding at the acquisition date and is considered Level 1. The acquisition of the noncontrolling interest during the three months ended March 31, 2017 resulted in a $8.9 million increase to additional paid-in capital on the consolidated balance sheet which represents the difference in consideration paid to acquire the noncontrolling interest and the carrying value of noncontrolling interest at acquisition.

The following table summarizes the final fair values of the Faiveley Transport assets acquired and liabilities assumed.

In thousands		
Assets acquired		
Cash and cash equivalents	$	178,318
Accounts receivable		439,631
Inventories		205,649
Other current assets		70,930
Property, plant, and equipment		148,746
Goodwill		1,262,350
Trade names		346,328
Customer Relationships		233,529
Patents		1,201
Other noncurrent assets		184,564
Total assets acquired		3,071,246
Liabilities assumed		
Current liabilities		819,493
Debt		409,899
Other noncurrent liabilities		335,039
Total liabilities assumed		1,564,431
Net assets acquired	$	1,506,815

During the twelve months ended December 31, 2017, the estimated fair values for customer relationships and current liabilities were adjusted by $21.8 million and $65.3 million, respectively, for changes to initial estimates based on information that existed at the date of acquisition. Additionally, the estimated fair values for accounts receivable and current liabilities were adjusted by $2.8 million and $36.2 million, respectively, to correct errors in the preliminary estimated fair values of the Faiveley Transport assets acquired and liabilities assumed. Other noncurrent assets were adjusted by $30.0 million to record the deferred tax impact of these adjustments. As a result of these adjustments and other immaterial adjustments related to changes to initial estimates based on information that existed at the date of acquisition, goodwill increased by $74.1 million. Accounts receivable and current liabilities were adjusted by $64.3 million to correct an error in the preliminary estimated fair values of Faiveley Transport assets and liabilities assumed related to a factoring arrangement with recourse.

Substantially all of the accounts receivable acquired are expected to be collectible. Included in current liabilities is $25.9 million of accrued compensation for acquired share-based stock plans that are obligated to be settled in cash. Contingent liabilities assumed as part of the transaction were not material. These contingent liabilities are related to environmental, legal and tax matters. Contingent liabilities are recorded at fair value in purchase accounting, aside from those pertaining to uncertainty in income taxes which are an exception to the fair value basis of accounting.

Goodwill was calculated as the difference between the acquisition date fair value of the consideration transferred and the fair value of the net assets acquired, and represents the future economic benefits, including synergies and assembled workforce, that we expect to achieve as a result of the acquisition. Purchased goodwill is not deductible for tax purposes. The goodwill allocated to the Freight segment is $72.0 million and the goodwill allocated to the Transit segment is $1,190.4 million.

Other Acquisitions

The Company made the following acquisitions operating as a business unit or component of a business unit in the Freight Segment:

- On December 4, 2017, the Company acquired Melett Limited ("Melett"), a leader in the design, manufacture, and supply of high-quality turbochargers and replacement parts to the turbocharger aftermarket, for a purchase price of approximately $74.0 million, net of cash acquired, resulting in preliminary goodwill of $22.5 million, none of which will be deductible for tax purposes.
- On April 5, 2017, the Company acquired Thermal Transfer Corporation ("TTC"), a leading provider of heat transfer solutions for industrial applications, for a purchase price of approximately $32.5 million, net of cash acquired, resulting in preliminary goodwill of $16.3 million, all of which will be deductible for tax purposes.

- On March 13, 2017, the Company acquired Aero Transportation Products ("ATP"), a manufacturer of engineered covering systems for hopper freight cars, for a purchase price of approximately $65.3 million, net of cash acquired, resulting in preliminary goodwill of $29.0 million, all of which will be deductible for tax purposes.
- On December 14, 2016, the Company acquired Workhorse Rail LLC ("Workhorse"), a supplier of engineered freight car components, mainly for the aftermarket for a purchase price of approximately $43.8 million, net of cash acquired, resulting in goodwill of $22.3 million, 38% of which will be deductible for tax purposes.
- On November 17, 2016, the Company acquired the assets of Precision Turbo & Engine ("Precision Turbo"), a designer and manufacturer of high-performance, aftermarket turbochargers, wastegates, and heat exchangers for the automotive performance market for a purchase price of approximately $13.9 million, net of cash acquired, resulting in goodwill of $4.2 million, all of which will be deductible for tax purposes.
- On May 5, 2016, the Company acquired the assets of Unitrac Railroad Materials ("Unitrac"), a leading designer and manufacturer of railroad products and track work services for a purchase price of approximately $14.8 million, net of cash acquired, resulting in goodwill of $2.4 million, all of which will be deductible for tax purposes.

For the Melett, TTC, and ATP acquisitions, the following table summarizes the preliminary estimated fair values of the assets acquired and liabilities assumed at the date of the acquisitions. For the Workhorse, Precision Turbo, and Unitrac acquisitions, the following table summarizes the final fair value of assets acquired and liabilities assumed at the date of acquisition.

	Melett	TTC	ATP	Workhorse	Precision Turbo	Unitrac
In thousands	**December 4, 2017**	**April 5, 2017**	**March 13, 2017**	**December 14, 2016**	**November 17, 2016**	**May 5, 2016**
Current assets	$ 21,068	$ 3,746	$ 11,666	$ 9,137	$ 4,145	$ 11,476
Property, plant & equipment	5,917	5,909	5,354	—	1,317	1,768
Goodwill	22,501	16,309	29,034	22,273	4,248	2,442
Other intangible assets	39,259	12,300	25,000	21,500	5,200	1,230
Total assets acquired	88,745	38,264	71,054	52,910	14,910	16,916
Total liabilities assumed	(14,789)	(5,753)	(5,800)	(9,083)	(1,057)	(2,145)
Net assets acquired	$ 73,956	$ 32,511	$ 65,254	$ 43,827	$ 13,853	$ 14,771

The Company made the following acquisitions operating as a business unit or component of a business unit in the Transit Segment:

- On October 2, 2017, the Company acquired AM General Contractor ("AM General"), a manufacturer of safety systems, mainly for transit rail cars for a purchase price of approximately $10.4 million, net of cash acquired, resulting in preliminary goodwill of $12.9 million, none of which will be deductible for tax purposes.
- On August 1, 2016, the Company acquired Gerken Group S.A. ("Gerken"), a manufacturer of specialty carbon and graphite products for rail and other industrial applications, for a purchase price of approximately $62.8 million, net of cash acquired, resulting in goodwill of $17.5 million, none of which will be deductible for tax purposes.

For the AM General acquisition, the following table summarizes the preliminary estimated fair value of the assets acquired and liabilities assumed at the date of acquisition. For the Gerken acquisition, the following table summarizes the final fair value of the assets acquired and liabilities assumed at the date of the acquisition.

	AM General	Gerken
In thousands	**October 2, 2017**	**August 1, 2016**
Current assets	$ 6,611	$ 32,706
Property, plant & equipment	4,140	7,667
Goodwill	12,943	17,470
Other intangible assets	12,097	30,560
Other assets	—	1,706
Total assets acquired	35,791	90,109
Total liabilities assumed	(25,375)	(27,262)
Net assets acquired	$ 10,416	$ 62,847

The acquisitions listed above include escrow deposits of $44.4 million, which may be released to the Company for indemnity and other claims in accordance with the purchase and escrow agreements.

The total goodwill and other intangible assets for acquisitions listed in the tables above was $2,117.8 million, of which $1,389.6 million and $728.2 million was related to goodwill and other intangible assets, respectively. Of the allocation of $728.2 million of acquired intangible assets, $380.9 million was assigned to trade names, $336.9 million was assigned to customer relationships, and $5.0 million was assigned to intellectual property. The trade names are considered to have an indefinite useful life while the intellectual property and customer relationships' useful life is 20 years.

The Company also made smaller acquisitions not listed above which are individually and collectively immaterial.

The following unaudited pro forma financial information presents income statement results as if the acquisitions listed above had occurred January 1, 2016:

	For the year ended December 31,	
In thousands	**2017**	**2016**
Net sales	$ 3,946,244	$ 4,212,617
Gross profit	1,095,101	1,275,835
Net income attributable to Wabtec shareholders	271,783	349,852
Diluted earnings per share		
As Reported	$ 2.72	$ 3.34
Pro forma	$ 2.82	$ 3.83

The historical consolidated financial information of the Company and the acquisitions detailed above have been adjusted in the pro forma information to give effect to pro forma events that are (1) directly attributable to the transactions, (2) factually supportable and (3) expected to have a continuing impact on the combined results. Pro forma data may not be indicative of the results that would have been obtained had these acquisitions occurred at the beginning of the periods presented, nor is it intended to be a projection of future results.

4. SUPPLEMENTAL CASH FLOW DISCLOSURES

	Year Ended December 31,		
	2017	**2016**	**2015**
In thousands			
Interest paid during the year	$ 75,317	$ 30,211	$ 19,372
Income taxes paid during the year, net of amount refunded	$ 89,379	$ 121,563	$ 147,958
Business acquisitions:			
Fair value of assets acquired	452,209	3,118,420	156,020
Liabilities assumed	207,788	1,453,382	20,789
Non-controlling interest (acquired) assumed	(738,024)	760,343	—
Stock and cash paid	982,445	904,695	135,231
Less: Cash acquired	35,408	186,903	5,681
Stock used for acquisition	25,500	534,679	—
Net cash paid	$ 921,537	$ 183,113	$ 129,550

5. INVENTORIES

The components of inventory, net of reserves, were:

	December 31,	
In thousands	**2017**	**2016**
Raw materials	$ 378,481	$ 331,465
Work-in-progress	167,390	145,462
Finished goods	196,763	181,583
Total inventories	$ 742,634	$ 658,510

6. PROPERTY, PLANT & EQUIPMENT

The major classes of depreciable assets are as follows:

In thousands	December 31, 2017	December 31, 2016
Machinery and equipment	$ 728,257	$ 645,354
Buildings and improvements	259,561	225,307
Land and improvements	38,228	41,569
Property, plant and equipment	1,026,046	912,230
Less: accumulated depreciation	(452,074)	(393,854)
Total	$ 573,972	$ 518,376

The estimated useful lives of property, plant and equipment are as follows:

	Years
Land improvements	10 to 20
Building and improvements	20 to 40
Machinery and equipment	3 to 15

Depreciation expense was $66.7 million, $47.1 million, and $43.1 million for 2017, 2016 and 2015, respectively.

7. INTANGIBLES

Goodwill and other intangible assets with indefinite lives are not amortized. Other intangibles with definite lives are amortized on a straight-line basis over their estimated economic lives. Goodwill and indefinite lived intangible assets are reviewed annually during the fourth quarter for impairment (See Note 2 "Summary of Significant Accounting Policies" included herein). Goodwill and indefinite live intangible assets were not impaired at December 31, 2017 and 2016.

The change in the carrying amount of goodwill by segment for the year ended December 31, 2017 is as follows:

In thousands	Freight Segment	Transit Segment	Total
Balance at December 31, 2016	$ 550,902	$ 1,527,863	$ 2,078,765
Additions	152,096	34,391	186,487
Foreign currency impact	15,960	178,891	194,851
Balance at December 31, 2017	$ 718,958	$ 1,741,145	$ 2,460,103

As of December 31, 2017 and 2016, the Company's trade names had a net carrying amount of $603.4 million and $510.5 million, respectively, and the Company believes these intangibles have indefinite lives. Intangible assets of the Company, other than goodwill and trade names, consist of the following:

In thousands	December 31, 2017	December 31, 2016
Patents, non-compete and other intangibles, net of accumulated amortization of $43,021 and $40,638	$ 17,554	$ 15,360
Customer relationships, net of accumulated amortization of $126,824 and $87,334	583,459	528,068
Total	$ 601,013	$ 543,428

The remaining weighted average useful lives of patents, customer relationships and intellectual property were 10 years, 17 years and 15 years respectively. Amortization expense for intangible assets was $36.5 million, $22.7 million, and $21.7 million for the years ended December 31, 2017, 2016, and 2015, respectively.

Estimated amortization expense for the five succeeding years is as follows (in thousands):

2018	$ 38,059
2019	36,076
2020	34,050
2021	33,777
2022	33,489

8. LONG-TERM DEBT

Long-term debt consisted of the following:

In thousands	December 31, 2017	December 31, 2016
3.45% Senior Notes due 2026, net of unamortized debt issuance costs of $2,345 and $2,526	$ 747,655	$ 747,474
4.375% Senior Notes due 2023, net of unamortized discount and debt issuance costs of $1,433 and $1,690	248,567	248,310
Revolving Credit Facility and Term Loan, net of unamortized debt issuance costs of $2,451 and $3,850	853,124	796,150
Schuldschein Loan	11,998	98,671
Other Borrowings	6,860	1,153
Capital Leases	2,324	1,018
Total	1,870,528	1,892,776
Less - current portion	47,225	129,809
Long-term portion	$ 1,823,303	$ 1,762,967

Wabtec's acquisition of the controlling stake of Faiveley Transport triggered the early repayment of a syndicated loan and the mandatory offer to investors to repay the US and Schuldschein private placements. Both the syndicated loan and US private placements were repaid in full in December 2016.

3.45% Senior Notes Due November 2026

In October 2016, the Company issued $750.0 million of Senior Notes due in 2026 (the “2016 Notes”). The 2016 Notes were issued at 99.965% of face value. Interest on the 2016 Notes accrues at a rate of 3.45% per annum and is payable semi-annually on May 15 and November 15 of each year. The proceeds were used to finance the cash portion of the Faiveley Transport acquisition, refinance Faiveley Transport’s indebtedness, and for general corporate purposes. The principal balance is due in full at maturity. The Company incurred $2.7 million of deferred financing costs related to the issuance of the 2016 Notes.

The 2016 Notes are senior unsecured obligations of the Company and rank pari passu with all existing and future senior debt and senior to all existing and future subordinated indebtedness of the Company. The indenture under which the 2016 Notes were issued contains covenants and restrictions which limit among other things, the following: the incurrence of indebtedness, payment of dividends and certain distributions, sale of assets, change in control, mergers and consolidations and the incurrence of liens.

The Company is in compliance with the restrictions and covenants in the indenture under which the 2016 Notes were issued and expects that these restrictions and covenants will not be any type of limiting factor in executing our operating activities.

4.375% Senior Notes Due August 2023

In August 2013, the Company issued $250.0 million of Senior Notes due in 2023 (the “2013 Notes”). The 2013 Notes were issued at 99.879% of face value. Interest on the 2013 Notes accrues at a rate of 4.375% per annum and is payable semi-annually on February 15 and August 15 of each year. The proceeds were used to repay debt outstanding under the Company’s existing credit agreement, and for general corporate purposes. The principal balance is due in full at maturity. The Company incurred $2.6 million of deferred financing costs related to the issuance of the 2013 Notes.

The 2013 Notes are senior unsecured obligations of the Company and rank pari passu with all existing and future senior debt and senior to all existing and future subordinated indebtedness of the Company. The indenture under which the 2013 Notes were issued contains covenants and restrictions which limit among other things, the following: the incurrence of indebtedness, payment of dividends and certain distributions, sale of assets, change in control, mergers and consolidations and the incurrence of liens.

The Company is in compliance with the restrictions and covenants in the indenture under which the 2013 Notes were issued and expects that these restrictions and covenants will not be any type of limiting factor in executing our operating activities.

2016 Refinancing Credit Agreement

On June 22, 2016, the Company amended its existing revolving credit facility with a consortium of commercial banks. This “2016 Refinancing Credit Agreement” provides the Company with a $1.2 billion, 5 year revolving credit facility and a $400.0 million delayed draw term loan (the “Term Loan”). The Company incurred approximately $3.3 million of deferred financing cost related to the 2016 Refinancing Credit Agreement. The facility expires on June 22, 2021. The 2016 Refinancing Credit Agreement borrowings bear variable interest rates indexed as described below. At December 31, 2017, the Company had available bank borrowing capacity, net of $35.4 million of letters of credit, of approximately $679.0 million, subject to certain financial covenant restrictions.

The Term Loan was drawn on November 25, 2016. The Company incurred a 10 basis point commitment fee from June 22, 2016 until the initial draw on November 25, 2016.

Under the 2016 Refinancing Credit Agreement, the Company may elect a Base Rate of interest for U.S. Dollar denominated loans or, for certain currencies, an interest rate based on the London Interbank Offered Rate (“LIBOR”) of interest, or other rates appropriate for such currencies (in any case, “the Alternate Rate”). The Base Rate adjusts on a daily basis and is the greater of the Federal Funds Effective Rate plus 0.50% per annum, the PNC, N.A. prime rate or the Daily LIBOR Rate plus 100 basis points, plus a margin that ranges from 0 to 75 basis points. The Alternate Rate is based on the quoted rates specific to the applicable currency, plus a margin that ranges from 75 to 175 basis points. Both the Base Rate and Alternate Rate margins are dependent on the Company’s consolidated total indebtedness to EBITDA ratios. The initial Base Rate margin is 0 basis points and the Alternate Rate margin is 175 basis points.

At December 31, 2017, the weighted average interest rate on the Company’s variable rate debt was 2.92%. On January 12, 2012, the Company entered into a forward starting interest rate swap agreement with a notional value of $150.0 million. The effective date of the interest rate swap agreement is July 31, 2013, and the termination date was November 7, 2016. The impact of the interest rate swap agreement converted a portion of the Company’s outstanding debt from a variable rate to a fixed-rate borrowing. During the term of the interest rate swap agreement the interest rate on the notional value was fixed at 1.415% plus the Alternate Rate margin. On June 5, 2014, the Company entered into a forward starting interest rate swap agreement with a notional value of $150.0 million. The effective date of the interest rate swap agreement is November 7, 2016, and the termination date is December 19, 2018. The impact of the interest rate swap agreement converts a portion of the Company’s outstanding debt from a variable rate to a fixed-rate borrowing. During the term of the interest rate swap agreement the interest rate on the notional value will be fixed at 2.56% plus the Alternate Rate margin. As for these agreements, the Company is exposed to credit risk in the event of nonperformance by the counterparties. However, since only the cash interest payments are exchanged, exposure is significantly less than the notional amount. The counterparties are large financial institutions with excellent credit ratings and history of performance. The Company currently believes the risk of nonperformance is negligible.

The 2016 Refinancing Credit Agreement limits the Company’s ability to declare or pay cash dividends and prohibits the Company from declaring or making other distributions, subject to certain exceptions. The 2016 Refinancing Credit Agreement contains various other covenants and restrictions including the following limitations: incurrence of additional indebtedness; mergers, consolidations, sales of assets and acquisitions; additional liens; sale and leasebacks; permissible investments, loans and advances; certain debt payments; and imposes a minimum interest expense coverage ratio of 3.0 and a maximum debt to EBITDA ratio of 3.25. The Company is in compliance with the restrictions and covenants of the 2016 Refinancing Credit Agreement and does not expect that these measurements will limit the Company in executing our operating activities.

Schuldschein Loan, Due 2016

In conjunction with the acquisition of Faiveley Transport, Wabtec acquired $137.2 million of a Schuldshein private placement loan which was originally issued by Faiveley Transport on March 5, 2014 in Germany, in which approximately 20 international investors participated. This loan is denominated in euros. Subsequent to the acquisition of Faiveley Transport, the Company repaid $125.3 million of the outstanding Schuldschein loan. The remaining balance of $12.0 million as of December 31, 2017 matures on March 5, 2024 and bears a fixed rate of 4.00%.

Debt and Capital Leases

Scheduled principal repayments of debt and capital lease balances as of December 31, 2017 are as follows:

2018	$	47,225
2019		330,901
2020		559
2021		483,379
2022		208
Future years		1,008,256
Total	$	1,870,528

9. EMPLOYEE BENEFIT PLANS

Defined Benefit Pension Plans

The Company sponsors defined benefit pension plans that cover certain U.S., Canadian, German, and United Kingdom employees and which provide benefits of stated amounts for each year of service of the employee. The Company uses a December 31 measurement date for the plans.

The following tables provide information regarding the Company's defined benefit pension plans summarized by U.S. and international components.

Obligations and Funded Status

	U.S.		International	
In thousands	**2017**	**2016**	**2017**	**2016**
Change in projected benefit obligation				
Obligation at beginning of year	$ (45,512)	$ (46,120)	$ (319,551)	$ (195,311)
Opening balance sheet adjustment	—	—	(5,321)	—
Service cost	(344)	(337)	(2,740)	(1,379)
Interest cost	(1,422)	(1,475)	(7,310)	(5,774)
Employee contributions	—	—	(880)	(195)
Plan curtailments and amendments	—	—	4,153	2,061
Benefits paid	3,079	3,893	12,906	9,427
Acquisition	—	—	—	(114,242)
Actuarial gain (loss)	(14)	(1,473)	(3,009)	(33,330)
Effect of currency rate changes	—	—	(31,265)	19,192
Obligation at end of year	$ (44,213)	$ (45,512)	$ (353,017)	$ (319,551)
Change in plan assets				
Fair value of plan assets at beginning of year	$ 35,802	$ 37,640	$ 241,283	$ 168,069
Opening balance sheet adjustment	—	—	2,058	—
Actual return on plan assets	4,223	2,055	19,102	20,066
Employer contributions	486	—	13,479	6,933
Employee contributions	—	—	880	195
Benefits paid	(3,079)	(3,893)	(12,905)	(9,427)
Acquisition	—	—	—	70,519
Settlements			(4,523)	
Effect of currency rate changes	—	—	22,228	(15,072)
Fair value of plan assets at end of year	$ 37,432	$ 35,802	$ 281,602	$ 241,283
Funded status				
Fair value of plan assets	$ 37,432	$ 35,802	$ 281,602	$ 241,283
Benefit obligations	(44,213)	(45,512)	(353,017)	(319,551)
Funded status	$ (6,781)	$ (9,710)	$ (71,415)	$ (78,268)
Amounts recognized in the statement of financial position consist of:				
Noncurrent assets	$ —	$ —	$ 10,577	$ 7,130
Current liabilities	—	—	(2,158)	(2,042)
Noncurrent liabilities	(6,781)	(9,710)	(79,834)	(83,356)
Net amount recognized	$ (6,781)	$ (9,710)	$ (71,415)	$ (78,268)
Amounts recognized in accumulated other comprehensive income (loss) consist of:				
Prior service cost	(6)	(8)	(32)	(56)
Net actuarial loss	(20,418)	(23,884)	(54,043)	(56,411)
Net amount recognized	$ (20,424)	$ (23,892)	$ (54,075)	$ (56,467)

The aggregate accumulated benefit obligation for the U.S. pension plans was $43.3 million and $44.5 million as of December 31, 2017 and 2016, respectively. The aggregate accumulated benefit obligation for the international pension plans was $344.3 million and $312.2 million as of December 31, 2017 and 2016, respectively.

In thousands	U.S. 2017	U.S. 2016	International 2017	International 2016
Information for pension plans with accumulated benefit obligations in excess of Plan assets:				
Projected benefit obligation	$ (44,213)	$ (45,512)	$ (282,077)	$ (255,682)
Accumulated benefit obligation	(43,340)	(44,530)	(274,557)	(249,729)
Fair value of plan assets	37,432	35,802	200,218	170,367
Information for pension plans with projected benefit obligations in excess of plan assets:				
Projected benefit obligation	$ (44,213)	$ (45,512)	$ (283,106)	$ (256,530)
Fair value of plan assets	37,432	35,802	201,115	171,133

Components of Net Periodic Benefit Costs

In thousands	U.S. 2017	U.S. 2016	U.S. 2015	International 2017	International 2016	International 2015
Service cost	$ 344	$ 337	$ 381	$ 2,740	$ 1,379	$ 2,015
Interest cost	1,422	1,475	1,914	7,310	5,774	7,091
Expected return on plan assets	(1,731)	(2,076)	(2,168)	(12,412)	(9,971)	(9,591)
Amortization of initial net obligation and prior service cost	3	3	3	27	61	212
Amortization of net loss	989	914	1,062	2,846	1,818	2,379
Settlement and curtailment losses recognized	—	—	—	768	218	—
Net periodic benefit cost	$ 1,027	$ 653	$ 1,192	$ 1,279	$ (721)	$ 2,106

Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income during 2017 are as follows:

In thousands	U.S.	International
Net gain (loss) arising during the year	$ 2,477	$ 3,683
Effect of exchange rates	—	(4,945)
Amortization, settlement, or curtailment recognition of net transition obligation	—	768
Amortization or curtailment recognition of prior service cost	3	27
Amortization or settlement recognition of net loss	989	2,846
Total recognized in other comprehensive gain	$ 3,469	$ 2,379
Total recognized in net periodic benefit cost and other comprehensive gain	$ 2,442	$ 1,100

The weighted average assumptions in the following table represent the rates used to develop the actuarial present value of the projected benefit obligation for the year listed.

	U.S. 2017	U.S. 2016	U.S. 2015	International 2017	International 2016	International 2015
Discount rate	3.56%	3.95%	4.21%	2.40%	2.51%	3.56%
Expected return on plan assets	4.95%	5.70%	5.70%	5.02%	6.07%	5.81%
Rate of compensation increase	3.00%	3.00%	3.00%	2.54%	2.54%	3.10%

The discount rate is based on settling the pension obligation with high grade, high yield corporate bonds, and the rate of compensation increase is based on actual experience. The expected return on plan assets is based on historical performance as well as expected future rates of return on plan assets considering the current investment portfolio mix and the long-term investment strategy.

As of December 31, 2017, the following table represents the amounts included in other comprehensive loss that are expected to be recognized as components of periodic benefit costs in 2018.

In thousands	**U.S.**	**International**
Prior service cost	3	22
Net actuarial loss	970	2,193
	$ 973	$ 2,215

Pension Plan Assets

The Company has established formal investment policies for the assets associated with our pension plans. Objectives include maximizing long-term return at acceptable risk levels and diversifying among asset classes. Asset allocation targets are based on periodic asset liability study results which help determine the appropriate investment strategies. The investment policies permit variances from the targets within certain parameters. The plan assets consist primarily of equity security funds, debt security funds, and temporary cash and cash equivalent investments. The assets held in these funds are generally actively managed and are valued at the net asset value per share multiplied by the number of shares held as of the measurement date. (See Note 18 "Fair Value Measurement" included herein). Plan assets by asset category at December 31, 2017 and 2016 are as follows:

	U.S.		**International**	
In thousands	**2017**	**2016**	**2017**	**2016**
Pension Plan Assets				
Equity security funds	$ 18,122	$ 17,446	$ 100,453	$ 92,201
Debt security funds and other	18,304	17,038	178,730	145,003
Cash and cash equivalents	1,006	1,318	2,419	4,079
Fair value of plan assets	$ 37,432	$ 35,802	$ 281,602	$ 241,283

The U.S. plan has a target asset allocation of 55% equity securities and 45% debt securities. The International plan has a target asset allocation of 30% equity securities, 40% debt securities and 30% in other investments. Investment policies are determined by the respective Plan's Pension Committee and set forth in its Investment Policy. Rebalancing of the asset allocation occurs on a quarterly basis.

The following tables summarize our pension plan assets measured at fair value on a recurring basis by fair value hierarchy level (See Note 18):

	December 31, 2017				
In thousands	**NAV**	**Level 1**	**Level 2**	**Level 3**	**Total**
US:					
Equity	$ —	$ 18,122	$ —	$ —	$ 18,122
Debt Securities	—	4,273	14,031	—	18,304
Cash and cash equivalents	—	1,006	—	—	1,006
International:					
Equity	$ 4,586	$ 38,647	$ 95,641	$ —	$ 138,874
Debt Securities	—	—	111,204	—	111,204
Insurance Contracts	—	—	15,893	13,123	29,016
Cash and cash equivalents	—	2,507	—	—	2,507
Total	$ 4,586	$ 64,555	$ 236,769	$ 13,123	$ 319,033

In thousands	December 31, 2016 NAV	Level 1	Level 2	Level 3	Total
US:					
Equity	$ —	$ 17,446	$ —	$ —	$ 17,446
Debt Securities	—	4,766	12,272	—	17,038
Cash and cash equivalents	—	1,318	—	—	1,318
International:					
Equity	$ 3,589	$ 38,053	$ 78,694	$ —	$ 120,336
Debt Securities	—	—	90,508	—	90,508
Insurance Contracts	—	—	13,037	12,996	26,033
Cash and cash equivalents	—	4,406	—	—	4,406
Total	$ 3,589	$ 65,989	$ 194,511	$ 12,996	$ 277,085

The following table presents a reconciliation of Level 3 assets:

In thousands	Total
Balance at December 31, 2015	$ —
Net purchases, issuances, and settlements	56
Net realized and unrealized gains (losses) included in earnings	(5)
Business acquisition	12,949
Other	(4)
Balance at December 31, 2016	$ 12,996
Net purchases, issuances, and settlements	778
Net realized and unrealized gains (losses) included in earnings	375
Opening balance sheet adjustment	(1,308)
Other	282
Balance at December 31, 2017	$ 13,123

Cash Flows

The Company’s funding methods are based on governmental requirements and differ from those methods used to recognize pension expense. The Company expects to contribute $7.3 million and $0.0 million to the international and U.S. plans, respectively, during 2018.

Benefit payments expected to be paid to plan participants are as follows:

In thousands	U.S.	International
Year ended December 31,		
2018	$ 3,250	$ 12,401
2019	3,301	12,403
2020	3,325	13,156
2021	3,160	13,799
2022	3,125	14,538
2023 through 2027	14,276	77,817

Postretirement Benefit Plans

In addition to providing pension benefits, the Company has provided certain unfunded postretirement health care and life insurance benefits for a portion of North American employees. The Company is not obligated to pay health care and life insurance benefits to individuals who had retired prior to 1990.

The Company uses a December 31 measurement date for all postretirement plans. The following tables provide information regarding the Company's post retirement benefit plans summarized by U.S. and international components.

Obligations and Funded Status

	U.S.		International	
In thousands	**2017**	**2016**	**2017**	**2016**
Change in projected benefit obligation				
Obligation at beginning of year	$ (11,876)	$ (12,959)	$ (3,425)	$ (3,290)
Service cost	(5)	(4)	(28)	(29)
Interest cost	(350)	(389)	(98)	(99)
Plan amendments	—	6	—	—
Benefits paid	970	720	199	133
Acquisition	—	(143)	—	—
Actuarial gain (loss)	(84)	893	(131)	(42)
Effect of currency rate changes	—	—	(237)	(98)
Obligation at end of year	$ (11,345)	$ (11,876)	$ (3,720)	$ (3,425)
Change in plan assets				
Fair value of plan assets at beginning of year	$ —	$ —	$ —	$ —
Employer contributions	970	720	199	133
Benefits paid	(970)	(720)	(199)	(133)
Fair value of plan assets at end of year	$ —	$ —	$ —	$ —
Funded status				
Fair value of plan assets	$ —	$ —	$ —	$ —
Benefit obligations	(11,345)	(11,876)	(3,720)	(3,425)
Funded status	$ (11,345)	$ (11,876)	$ (3,720)	$ (3,425)

	U.S.		International	
In thousands	**2017**	**2016**	**2017**	**2016**
Amounts recognized in the statement of financial position consist of:				
Current liabilities	$ (1,046)	$ (1,084)	$ (208)	$ (185)
Noncurrent liabilities	(10,299)	(10,792)	(3,512)	(3,160)
Net amount recognized	$ (11,345)	$ (11,876)	$ (3,720)	$ (3,345)
Amounts recognized in accumulated other comprehensive income (loss) consist of:				
Prior service credit	19,616	21,134	9	15
Net actuarial (loss) gain	(18,882)	(20,023)	154	292
Net amount recognized	$ 734	$ 1,111	$ 163	$ 307

Components of Net Periodic Benefit Cost

	U.S.			International		
In thousands	**2017**	**2016**	**2015**	**2017**	**2016**	**2015**
Service cost	$ 5	$ 4	$ 9	$ 28	$ 29	$ 38
Interest cost	350	389	1,233	98	99	128
Amortization of initial net obligation and prior service cost	(1,519)	(1,709)	(2,295)	(7)	(7)	(7)
Amortization of net loss (gain)	1,225	1,287	1,356	(23)	(29)	(30)
Net periodic benefit cost (credit)	$ 61	$ (29)	$ 303	$ 96	$ 92	$ 129

Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income during 2017 are as follows:

In thousands	**U.S.**	**International**
Net loss arising during the year	(84)	(131)
Effect of exchange rates	—	16
Amortization or curtailment recognition of prior service cost	(1,519)	(7)
Amortization or settlement recognition of net loss (gain)	1,225	(23)
Total recognized in other comprehensive income (loss)	$ (378)	$ (145)
Total recognized in net periodic benefit cost and other comprehensive income (loss)	$ (317)	$ (53)

The weighted average assumptions in the following table represent the rates used to develop the actuarial present value of the projected benefit obligation for the year listed and also the net periodic benefit cost for the following year. The discount rate is based on settling the pension obligation with high grade, high yield corporate bonds.

	U.S.			International		
	2017	2016	2015	2017	2016	2015
Discount rate	3.43%	3.76%	3.95%	3.21%	3.46%	3.80%

As of December 31, 2017, the following table represents the amounts included in other comprehensive loss that are expected to be recognized as components of periodic benefit costs in 2018.

In thousands	U.S.	International
Prior service credit	(1,519)	(7)
Net actuarial loss (gain)	1,216	(8)
	$ (303)	$ (15)

The assumed health care cost trend rate for the U.S. plans grades from an initial rate of 6.30% to an ultimate rate of 4.50% by 2027 and for international plans from 6.23% to 4.50% by 2027. A 1.0% increase in the assumed health care cost trend rate will increase the service and interest cost components of the expense recognized for the U.S. and international post-retirement plans by less than $0.1 million for 2017, and increase the accumulated post-retirement benefit obligation by less than $0.1 million and $0.3 million, respectively. A 1.0% decrease in the assumed health care cost trend rate will decrease the service and interest cost components of the expense recognized for the U.S. and international post-retirement plans by less than $0.1 million for 2017, and decrease the accumulated post-retirement benefit obligation by less than $0.1 million and $0.3 million, respectively.

Cash Flows

Benefit payments expected to be paid to plan participants are as follows:

In thousands	U.S.	International
Year ended December 31,		
2018	$ 1,046	$ 208
2019	1,024	220
2020	986	225
2021	950	245
2022	908	251
2023 through 2027	3,956	1,352

Defined Contribution Plans

The Company also participates in certain defined contribution plans and multiemployer pension plans. Costs recognized under these plans are summarized as follows:

	For the year ended December 31,		
In thousands	2017	2016	2015
Multi-employer pension and health & welfare plans	$ 1,522	$ 2,054	$ 2,584
401(k) savings and other defined contribution plans	23,209	23,062	21,399
Total	$ 24,731	$ 25,116	$ 23,983

The 401(k) savings plan is a participant directed defined contribution plan that holds shares of the Company's stock as one of the investment options. At December 31, 2017 and 2016, the plan held on behalf of its participants about 495,274 shares with a market value of $40.3 million, and 551,482 shares with a market value of $45.8 million, respectively.

Additionally, the Company has stock option based benefit and other plans further described in Note 12.

The Company contributes to several multi-employer defined benefit pension plans under collective bargaining agreements that cover certain of its union-represented employees. The risks of participating in such plans are different from the risks of single-employer plans. Assets contributed to a multi-employer plan by one employer may be used to provide benefits to employees of other participating employers. If a participating employer ceases to contribute to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers. If the Company ceases to have an obligation to contribute to the multi-employer plan in which it had been a contributing employer, it may be required to pay to the plan an amount based on the underfunded status of the plan and on the history of the Company's participation in the plan prior to the cessation of its obligation to contribute. The amount that an employer that has ceased to have an obligation to contribute to a multi-employer plan is required to pay to the plan is referred to as a withdrawal liability.

The Company's participation in multi-employer plans for the year ended December 31, 2017 is outlined in the table below. For plans that are not individually significant to the Company, the total amount of contributions is presented in the aggregate.

Pension Fund	EIN/PN (a)		Pension Protection Act Zone Status (b) 2016	2015	FIP/ RP Status Pending/ Implemented (c)	Contributions by the Company 2017		2016		2015		Surcharge Imposed (d)	Expiration Dates of Collective Bargaining Agreements
Idaho Operating Engineers-	EIN #	91-6075538	Green	Green	No	$ 1,020	(1)	$ 1,306	(1)	$ 1,820	(1)	No	6/30/2018
Employers Pension Trust Fund	Plan#	001											
Automobile Mechanics' Local No 701 Union and	EIN #	36-6042061	Yellow	Red	Yes (2)	$ 501	(3)	$ 748		$ 764		No (4)	6/1/2018
Industry Pension Plan	Plan #	001											
					Total Contributions	$ 1,521		$ 2,054		$ 2,584			

(1) The Company's contribution represents more than 5% of the total contributions to the plan.
(2) The Pension Fund's board adopted a Funding Improvement Plan on October 21, 2015, continuing the existing plan which increased the weekly pension fund contribution rates by $75 with corresponding decreases to the weekly welfare fund contribution rates until December 31, 2017.
(3) The number of employees covered by this fund decreased due to the closure of the Bensenville, Illinois facility, which affected the period-to-period comparability of 2016 and 2017 contributions.
(4) Critical status triggered a 5% surcharge on employer contributions effective June 2012. Effective January 1, 2013, this surcharge increases to 10%. The surcharge ended on October 21, 2015 when the rehabilitation plan commenced.

(a) The "EIN / PN" column provides the Employer Identification Number and the three-digit plan number assigned to a plan by the Internal Revenue Service.
(b) The most recent Pension Protection Act Zone Status available for 2017 and 2016 is for plan years that ended in 2016 and 2015, respectively. The zone status is based on information provided to the Company and other participating employers by each plan and is certified by the plan's actuary. A plan in the "red" zone has been determined to be in "critical status", based on criteria established under the Internal Revenue Code ("Code"), and is generally less than 65% funded. A plan in the "yellow" zone has been determined to be in "endangered status", based on criteria established under the Code, and is generally less than 80% funded. A plan in the "green" zone has been determined to be neither in "critical status" nor in "endangered status", and is generally at least 80% funded.
(c) The "FIP/RP Status Pending/Implemented" column indicates whether a Funding Improvement Plan, as required under the Code to be adopted by plans in the "yellow" zone, or a Rehabilitation Plan, as required under the Code to be adopted by plans in the "red" zone, is pending or has been implemented as of the end of the plan year that ended in 2017.
(d) The "Surcharge Imposed" column indicates whether the Company's contribution rate for 2017 included an amount in addition the contribution rate specified in the applicable collective bargaining agreement, as imposed by a plan in "critical status", in accordance with the requirements of the Code.

10. INCOME TAXES

The Company is responsible for filing consolidated U.S., foreign and combined, unitary or separate state income tax returns. The Company is responsible for paying the taxes relating to such returns, including any subsequent adjustments resulting from the redetermination of such tax liabilities by the applicable taxing authorities.

On December 23, 2017, the French government enacted the Finance Act for 2018 and it was published in the Official Bulletin on December 31, 2017. The Finance act reduced the French corporate tax rate from 28% in 2020 to 25%, enacting an additional 1.5% reduction in each year 2021 and 2022.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act makes broad and complex changes to the U.S. tax code that affect fiscal 2017, including, but not limited to requiring a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries that is payable over eight years (the "Transition Tax"). The Tax Act also establishes new tax laws that will affect 2018 and later years, including, but not limited to, a reduction of the U.S. federal corporate tax rate from 35% to 21%, repeals the Domestic Manufacturing Deduction, a general elimination of U.S. federal income taxes on dividends from foreign subsidiaries, new provisions designed to tax global intangible low-taxed income ("GILTI"), tax certain deductible base erosion payments called base erosion and anti-abuse tax ("BEAT"), and new interest expense limitation provisions.

In relation to the initial analysis of the impact of the all tax law changes, the Company has recorded a net tax expense of $4.3 million. This includes a provisional expense for the U.S. tax reform bill of $55.0 million, as well as a net benefit for the revaluation of deferred tax assets and liabilities of $50.7 million.

The Company has not completed its accounting for the income tax effects of the Tax Act. Where the Company has been able to make reasonable estimates of the effects for which its analysis is not yet complete, the Company has recorded provisional amounts in accordance with SEC Staff Accounting Bulletin No. 118. Where the Company has not yet been able to make reasonable estimates of the impact of certain elements, the Company has not recorded any amounts related to those elements and has continued accounting for them in accordance with ASC 740 on the basis of the tax laws in effect immediately prior to the enactment of the Tax Act.

The Company's accounting for the following impacted areas of the Tax Act is incomplete. However, the Company was able to make reasonable estimates of certain effects and, therefore, has recorded provisional amounts as follows:

Revaluation of deferred tax assets and liabilities*:* The Tax Act reduces the U.S. federal corporate tax rate from 35% to 21% for tax years beginning after December 31, 2017. In addition, the Tax Act makes certain changes to the depreciation rules and implements new limits on the deductibility of certain executive compensation. The Company has evaluated these changes and has recorded a provisional benefit to net deferred taxes of $24.6 million. The Company is still completing its calculation of the impact of these changes on its deferred tax balances.

Transition Tax on unrepatriated foreign earnings: The Transition Tax on unrepatriated foreign earnings is a tax on previously untaxed accumulated and current earnings and profits ("E&P") of the Company's foreign subsidiaries. To determine the amount of the Transition Tax, the Company must determine, among other factors, the amount of post-1986 E&P of its foreign subsidiaries, as well as the amount of non-U.S. income taxes paid on such earnings. The Company was able to make a reasonable estimate of the Transition Tax and has recorded a provisional Transition Tax expense of $51.8 million. The Company is continuing to gather additional information to more precisely compute the amount of the Transition Tax to complete its calculation of E&P as well as the final determination of non-U.S. income taxes paid.

The Company's accounting for the following elements of the Tax Act is incomplete, and it has not yet been able to make reasonable estimates of the effects of these items. Therefore, no provisional amounts were recorded.

Global intangible low taxed income ("GILTI"): The Tax Act creates a new requirement that certain income (i.e., GILTI) earned by foreign subsidiaries must be included currently in the gross income of the U.S. shareholder. Due to the complexity of the new GILTI tax rules, the Company is continuing to evaluate this provision of the Tax Act and the application of ASC 740. Under U.S. GAAP, the Company is permitted to make an accounting policy election to either treat taxes due on future inclusions in U.S. taxable income related to GILTI as a current-period expense when incurred or to factor such amounts into the Company's measurement of its deferred taxes. The Company has not yet completed its analysis of the GILTI tax rules and is not yet able to reasonably estimate the effect of this provision of the Tax Act or make an accounting policy election for the ASC 740 treatment of the GILTI tax. Therefore, the Company has not recorded any amounts related to potential GILTI tax in its financial statements and has not yet made a policy decision regarding whether to record deferred taxes on GILTI.

Indefinite reinvestment assertion: Beginning in 2018, the Tax Act provides a 100% deduction for dividends received from 10-percent owned foreign corporations by U.S. corporate shareholders, subject to a one-year holding period. Although dividend income is now exempt from U.S. federal tax in the hands of the U.S. corporate shareholders, companies must still apply the guidance of ASC 740 to account for the tax consequences of outside basis differences and other tax impacts of their investments in non-U.S. subsidiaries. While the Company has accrued the Transition Tax on the deemed repatriated earnings that were previously indefinitely reinvested, the Company was unable to determine a reasonable estimate of the remaining tax liability, if any, under the Tax Act for its remaining outside basis differences or evaluate how the Tax Act will affect the Company's existing accounting position to indefinitely reinvest unremitted foreign earnings. Therefore, the Company has not included a provisional amount for this item in its financial statements for fiscal 2017. The Company will record amounts as needed for this item beginning in the first reporting period during the measurement period in which the Company obtains necessary information and is able to analyze and prepare a reasonable estimate.

The components of the income from operations before provision for income taxes for the Company's domestic and foreign operations for the years ended December 31 are provided below:

	For the year ended December 31,		
In thousands	**2017**	**2016**	**2015**
Domestic	$ 140,325	$ 276,218	$ 461,394
Foreign	211,738	136,619	123,974
Income from operations before income taxes	$ 352,063	$ 412,837	$ 585,368

The consolidated provision for income taxes included in the Statement of Income consisted of the following:

	For the year ended December 31,		
In thousands	**2017**	**2016**	**2015**
Current taxes			
Federal	$ 86,157	$ 72,317	$ 141,245
State	3,644	9,953	16,072
Foreign	67,395	27,391	24,442
	157,196	109,661	181,759
Deferred taxes			
Federal	(22,863)	11,013	9,606
State	(1,024)	1,953	770
Foreign	(43,536)	(23,194)	(5,395)
	(67,423)	(10,228)	4,981
Total provision	$ 89,773	$ 99,433	$ 186,740

A reconciliation of the United States federal statutory income tax rate to the effective income tax rate on operations for the years ended December 31 is provided below:

	For the year ended December 31,		
In thousands	**2017**	**2016**	**2015**
U.S. federal statutory rate	35.0 %	35.0 %	35.0 %
State taxes	0.4 %	2.1 %	2.0 %
Tax reserves	— %	(0.2)%	(0.4)%
Foreign	(8.3)%	(4.3)%	(2.1)%
Research and development credit	(0.8)%	(1.0)%	(0.4)%
Manufacturing deduction	(1.1)%	(1.8)%	(2.3)%
France tax rate change	(6.5)%	(6.5)%	— %
U.S. tax rate change	(7.9)%	— %	— %
U.S. tax reform provision	15.6 %	— %	— %
Transaction costs related to acquisitions	— %	1.5 %	— %
Other, net	(0.9)%	(0.7)%	0.1 %
Effective rate	25.5 %	24.1 %	31.9 %

The 6.5% decrease in the effective tax rate due to the France tax rate change was the result of adopted tax legislation that reduces the corporate income tax rate in France from 28.0% to 25.0% over the period 2021 to 2022. The 7.9% decrease in the effective tax rate due to the U.S. tax rate change was the result of adopted tax legislation that reduces the corporate income tax rate in the U.S. from 35.0% to 21.0% effective January 1, 2018. The 15.6% increase in the effective tax rate due to the U.S. tax reform previously discussed. Deferred income taxes result from temporary differences in the recognition of income and expense for financial and income tax reporting purposes. These deferred income taxes will be recognized as future tax benefits or costs when the temporary differences reverse.

Components of deferred tax assets and liabilities were as follows:

In thousands	December 31, 2017	December 31, 2016
Deferred income tax assets:		
Accrued expenses and reserves	$ 10,961	$ 26,117
Warranty reserve	20,211	24,131
Deferred compensation/employee benefits	18,353	25,755
Pension and postretirement obligations	21,637	25,595
Inventory	19,620	22,579
Net operating loss carry forwards	65,671	59,416
Tax credit carry forwards	1,921	621
Other	13,053	2,317
Gross deferred income tax assets	171,427	186,531
Valuation allowance	25,683	21,418
Total deferred income tax assets	145,744	165,113
Deferred income tax liabilities:		
Property, plant & equipment	37,015	47,321
Intangibles	288,141	359,312
Total deferred income tax liabilities	325,156	406,633
Net deferred income tax liability	$ (179,412)	$ (241,520)

A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. As of December 31, 2017, the valuation allowance for certain foreign carryforwards was $25.7 million primarily in Brazil, China, United Kingdom, and South Africa.

Net operating loss carry-forwards in the amount of $65.7 million expire in various periods from December 31, 2018 to December 31, 2037.

As of December 31, 2017, the liability for income taxes associated with unrecognized tax benefits was $6.9 million, of which $4.4 million, if recognized, would favorably affect the Company's effective income tax rate. As of December 31, 2016, the liability for income taxes associated with unrecognized tax benefits was $8.4 million, of which $4.2 million, if recognized, would favorably affect the Company's effective tax rate. A reconciliation of the beginning and ending amount of the liability for income taxes associated with unrecognized tax benefits follows:

In thousands	2017	2016	2015
Gross liability for unrecognized tax benefits at beginning of year	$ 8,423	$ 10,557	$ 12,596
Gross increases - unrecognized tax benefits in prior periods	2,466	6	—
Gross increases - current period unrecognized tax benefits	—	—	1,682
Gross decreases - unrecognized tax benefits in prior periods	—	—	—
Gross decreases - audit settlement during year	(3,979)	—	(3,027)
Gross decreases - expiration of audit statute of limitations	—	(2,140)	(694)
Gross liability for unrecognized tax benefits at end of year	$ 6,910	$ 8,423	$ 10,557

The Company includes interest and penalties related to unrecognized tax benefits in income tax expense. As of December 31, 2017, the total interest and penalties accrued was approximately $0.7 million and $0.1 million, respectively. As of December 31, 2016, the total interest and penalties accrued was approximately $0.8 million and $0.3 million, respectively.

With limited exception, the Company is no longer subject to examination by various U.S. and foreign taxing authorities for years before 2012. At this time, the Company believes that it is reasonably possible that unrecognized tax benefits of approximately $5.2 million may change within the next 12 months due to the expiration of statutory review periods and current examinations.

11. EARNINGS PER SHARE

The computation of earnings per share from operations is as follows:

In thousands, except per share data	For the Year Ended December 31, 2017	2016	2015
Numerator			
Numerator for basic and diluted earnings per common share - net income attributable to Wabtec shareholders	$ 262,261	$ 304,887	$ 398,628
Less: dividends declared - common shares and non-vested restricted stock	(42,218)	(32,430)	(26,963)
Undistributed earnings	220,043	272,457	371,665
Percentage allocated to common shareholders (1)	99.7%	99.7%	99.7%
	219,383	271,640	370,550
Add: dividends declared - common shares	42,092	32,333	26,875
Numerator for basic and diluted earnings per common share	$ 261,475	$ 303,973	$ 397,425
Denominator			
Denominator for basic earnings per common share - weighted average shares	95,453	90,359	96,074
Effect of dilutive securities:			
Assumed conversion of dilutive stock-based compensation plans	672	782	932
Denominator for diluted earnings per common share - adjusted weighted average shares and assumed conversion	96,125	91,141	97,006
Net income per common share attributable to Wabtec shareholders			
Basic	$ 2.74	$ 3.37	$ 4.14
Diluted	$ 2.72	$ 3.34	$ 4.10
(1) Basic weighted-average common shares outstanding	95,453	90,359	96,074
Basic weighted-average common shares outstanding and non-vested restricted stock expected to vest	95,740	90,627	96,388
Percentage allocated to common shareholders	99.7%	99.7%	99.7%

Options to purchase approximately 24,000, 20,000, and 13,000 shares of Common Stock were outstanding in 2017, 2016 and 2015, respectively, but were not included in the computation of diluted earnings because their impact would have been antidilutive.

12. STOCK-BASED COMPENSATION PLANS

As of December 31, 2017, the Company maintains employee stock-based compensation plans for stock options, restricted stock, and incentive stock units as governed by the 2011 Stock Incentive Compensation Plan, as amended and restated (the "2011 Plan") and the 2000 Stock Incentive Plan, as amended (the "2000 Plan"). The 2011 Plan has a term through May 10, 2027 and as of December 31, 2017 the number of shares available for future grants under the 2011 Plan was 3,192,453 shares, which includes remaining shares to grant under the 2000 Plan. The amendment and restatement of the 2011 Plan was approved by stockholders of Wabtec on May 10, 2017. The Company also maintains a 1995 Non-Employee Directors' Fee and Stock Option Plan as amended and restated ("the Directors Plan"). The amendment and restatement of the Directors Plan was approved by stockholders of Wabtec on May 10, 2017. The Directors Plan, as amended, authorizes a total of 1,000,000 shares of Common Stock to be issued. Under the Directors Plan options issued become exercisable over a three-year vesting period and expire ten years from the date of grant and restricted stock issued under the plan vests one year from the date of grant. As compensation for directors' fees for the years ended December 31, 2017, 2016 and 2015, the Company issued a total of 16,500, 16,972 and 11,256 shares of restricted stock to non-employee directors. The total number of shares issued under the plan as of December 31, 2017 was 881,192 shares.

Stock-based compensation expense for all of the plans was $21.3 million, $20.8 million and $26.0 million for the years ended December 31, 2017, 2016 and 2015, respectively. The Company recognized associated tax benefits related to the stock-based compensation plans of $8.9 million, $14.9 million and $15.3 million for the respective periods. Included in the stock-based compensation expense for 2017 above is $1.7 million of expense related to stock options, $7.0 million related to non-vested restricted stock, $4.6 million related to restricted stock units, $6.5 million related to incentive stock units and $1.5 million related to units issued for Directors' fees. At December 31, 2017, unamortized compensation expense related to those stock options, non-vested restricted shares and incentive stock units expected to vest totaled $24.6 million and will be recognized over a weighted average period of 1.2 years.

Stock Options Stock options are granted to eligible employees and directors at the fair market value, which is the average of the high and low Wabtec stock price on the date of grant. Under the 2011 Plan and the 2000 Plan, options become exercisable over a four year vesting period and expire 10 years from the date of grant.

The following table summarizes the Company's stock option activity and related information for the 2011 Plan, the 2000 Plan and Directors Plan for the years ended December 31:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic value (in thousands)
Outstanding at December 31, 2014	1,147,558	$ 28.33	5.5	$ 67,205
Granted	84,675	87.35		1,375
Exercised	(124,156)	26.70		(5,516)
Canceled	(10,754)	65.22		(64)
Outstanding at December 31, 2015	1,097,323	$ 32.70	4.8	$ 42,154
Granted	94,115	61.39		2,035
Exercised	(83,790)	25.58		(4,813)
Canceled	(8,825)	71.47		(102)
Outstanding at December 31, 2016	1,098,823	$ 35.39	4.3	$ 52,332
Granted	65,522	86.91		—
Exercised	(166,838)	21.37		(10,020)
Canceled	(13,995)	76.89		(64)
Outstanding at December 31, 2017	983,512	$ 40.62	4.0	$ 40,137
Exercisable at December 31, 2017	802,609	$ 32.52	3.3	$ 36,848

Options outstanding at December 31, 2017 were as follows:

Range of exercise prices	Number of Options Outstanding	Weighted Average Exercise Price of Options Outstanding	Weighted Average Remaining Contractual Life	Number of Options Currently Exercisable	Weighted Average Exercise Price of Options Currently Exercisable
Under $15.00	180,000	$ 14.50	1.1	180,000	$ 14.50
15.00 - 23.00	193,701	18.77	1.3	193,701	18.77
23.00 - 30.00	136,924	28.75	2.8	136,924	28.75
30.00 - 38.00	94,496	35.24	4.1	94,496	35.24
Over 38.00	378,391	69.86	7.0	197,488	63.72
	983,512	$ 40.62		802,609	$ 32.52

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	For the year ended December 31, 2017	2016	2015
Dividend yield	0.23%	0.26%	0.14%
Risk-free interest rate	2.2%	1.5%	1.8%
Stock price volatility	23.4%	26.9%	27.3%
Expected life (years)	5.0	5.0	5.0
Weighted average fair value of options granted during the year	$ 20.69	$ 14.96	$ 24.41

The dividend yield is based on the Company's dividend rate and the current market price of the underlying common stock at the date of grant. Expected life in years is determined from historical stock option exercise data. Expected volatility is based on the historical volatility of the Company's stock. The risk-free interest rate is based on the 7 years U.S. Treasury bond rates for the expected life of the option.

Restricted Stock and Incentive Stock Beginning in 2006 the Company adopted a restricted stock program. As provided for under the 2011 and 2000 Plans, eligible employees are granted restricted stock that generally vests over four years from the date of grant. Under the Directors Plan, restricted stock units vest one year from the date of grant.

In addition, the Company has issued incentive stock units to eligible employees that vest upon attainment of certain cumulative three-year performance goals. Based on the Company's performance for each three year period then ended, the incentive stock units can vest and be awarded ranging from 0% to 200% of the initial incentive stock units granted. The incentive stock units included in the table below represent the number of shares that are expected to vest based on the Company's estimate for meeting those established performance targets. As of December 31, 2017, the Company estimates that it will achieve 84%, 77% and 91% for the incentive stock units expected to vest based on performance for the three year periods ending December 31, 2017, 2018, and 2019, respectively, and has recorded incentive compensation expense accordingly. If our estimate of the number of these stock units expected to vest changes in a future accounting period, cumulative compensation expense could increase or decrease and will be recognized in the current period for the elapsed portion of the vesting period and would change future expense for the remaining vesting period.

Compensation expense for the non-vested restricted stock and incentive stock units is based on the closing price of the Company's common stock on the date of grant and recognized over the applicable vesting period.

The following table summarizes the restricted stock activity and related information for the 2011 Plan, the 2000 Plan, and Directors Plan, and incentive stock units activity and related information for the 2011 Plan and the 2000 Plan with related information for the years ended December 31:

	Restricted Stock and Units	Incentive Stock Awards	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2014	438,543	791,608	$ 47.97
Granted	113,945	126,050	87.90
Vested	(182,776)	(433,932)	37.76
Adjustment for incentive stock awards expected to vest	—	65,666	57.57
Canceled	(12,827)	(7,754)	67.05
Outstanding at December 31, 2015	356,885	541,638	$ 65.89
Granted	212,600	167,850	66.03
Vested	(159,975)	(236,591)	51.80
Adjustment for incentive stock awards expected to vest	—	(38,164)	74.42
Canceled	(13,215)	(9,983)	71.84
Outstanding at December 31, 2016	396,295	424,750	$ 72.18
Granted	153,516	157,025	86.66
Vested	(137,088)	(153,271)	70.34
Adjustment for incentive stock awards expected to vest	—	(87,592)	73.69
Canceled	(13,723)	(13,579)	76.61
Outstanding at December 31, 2017	399,000	327,333	$ 78.76

13. OTHER COMPREHENSIVE LOSS

The components of accumulated other comprehensive loss were:

	December 31,	
In thousands	**2017**	**2016**
Foreign currency translation gain (loss)	$ 5,063	$ (321,033)
Unrealized gain (loss) on interest rate swap contracts, net of tax of $1,338 and $1,540	4,015	(2,957)
Unrealized loss on pension and post-retirement benefit plans, net of tax of $19,532 and $20,832	(54,070)	(55,615)
Total accumulated other comprehensive loss	$ (44,992)	$ (379,605)

The changes in accumulated other comprehensive loss by component, net of tax, for the year-ended December 31, 2017 are as follows:

In thousands	**Foreign currency translation**	**Derivative contracts**	**Pension and post retirement benefits plans**	**Total**
Balance at December 31, 2016	$ (321,033)	$ (2,957)	$ (55,615)	$ (379,605)
Other comprehensive income before reclassifications	326,096	6,712	(1,017)	331,791
Amounts reclassified from accumulated other comprehensive income	—	260	2,562	2,822
Net current period other comprehensive income	326,096	6,972	1,545	334,613
Balance at December 31, 2017	$ 5,063	$ 4,015	$ (54,070)	$ (44,992)

Reclassifications out of accumulated other comprehensive loss for the year-ended December 31, 2017 are as follows:

In thousands	**Amount reclassified from accumulated other comprehensive income**	**Affected line item in the Condensed Consolidated Statements of Income**
Amortization of defined pension and post retirement items		
Amortization of initial net obligation and prior service cost	$ (1,496)	Cost of sales
Amortization of net loss (gain)	5,037	Cost of sales
	3,541	Income from Operations
	(979)	Income tax expense
	$ 2,562	Net income
Derivative contracts		
Realized loss on derivative contracts	400	Interest expense, net
	(140)	Income tax expense
	$ 260	Net income

The changes in accumulated other comprehensive loss by component, net of tax, for the year-ended December 31, 2016 are as follows:

In thousands	**Foreign currency translation**	**Derivative contracts**	**Pension and post retirement benefits plans**	**Total**
Balance at December 31, 2015	$ (227,349)	$ (2,987)	$ (46,383)	$ (276,719)
Other comprehensive income before reclassifications	(93,684)	(1,286)	(10,874)	(105,844)
Amounts reclassified from accumulated other comprehensive income	—	1,316	1,642	2,958
Net current period other comprehensive income	(93,684)	30	(9,232)	(102,886)
Balance at December 31, 2016	$ (321,033)	$ (2,957)	$ (55,615)	$ (379,605)

Reclassifications out of accumulated other comprehensive loss for the year-ended December 31, 2016 are as follows:

In thousands	**Amount reclassified from accumulated other comprehensive income**	**Affected line item in the Condensed Consolidated Statements of Income**
Amortization of defined pension and post retirement items		
Amortization of initial net obligation and prior service cost	$ (1,652)	Cost of sales
Amortization of net loss (gain)	3,989	Cost of sales
	2,337	Income from Operations
	(695)	Income tax expense
	$ 1,642	Net income
Derivative contracts		
Realized loss on derivative contracts	1,873	Interest expense, net
	(557)	Income tax expense
	$ 1,316	Net income

14. OPERATING LEASES

The Company leases office and manufacturing facilities under operating leases with terms ranging from one to 15 years, excluding renewal options.

Total net rental expense charged to operations in 2017, 2016, and 2015 was $34.6 million, $27.2 million and $20.2 million, respectively. The amounts above are shown net of sublease rentals which were immaterial for the years 2017, 2016 and 2015, respectively.

Future minimum rental payments under operating leases with remaining non-cancelable terms in excess of one year are as follows:

In thousands	Real Estate	Equipment	Total
2018	$ 28,957	$ 2,690	$ 31,647
2019	25,857	1,925	27,782
2020	24,266	976	25,242
2021	19,561	512	20,073
2022	16,350	271	16,621
2023 and after	66,017	24	66,041

15. WARRANTIES

The following table reconciles the changes in the Company's product warranty reserve as follows:

In thousands	2017	2016
Balance at beginning of year	$ 138,992	$ 92,064
Warranty expense	50,385	28,947
Acquisitions	806	59,685
Warranty claim payments	(48,548)	(38,772)
Foreign currency impact	11,428	(2,932)
Balance at end of year	$ 153,063	$ 138,992

16. PREFERRED STOCK

The Company's authorized capital stock includes 1,000,000 shares of preferred stock. The Board of Directors has the authority to issue the preferred stock and to fix the designations, powers, preferences and rights of the shares of each such class or series, including dividend rates, conversion rights, voting rights, terms of redemption and liquidation preferences, without any further vote or action by the Company's shareholders. The rights and preferences of the preferred stock would be superior to those of the common stock. At December 31, 2017 and 2016 there was no preferred stock issued or outstanding.

17. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING

Foreign Currency Hedging The Company uses forward contracts to mitigate its foreign currency exchange rate exposure due to forecasted sales of finished goods and future settlement of foreign currency denominated assets and liabilities. Derivatives used to hedge forecasted transactions and specific cash flows associated with foreign currency denominated financial assets and liabilities that meet the criteria for hedge accounting are designated as cash flow hedges. The effective portion of gains and losses is deferred as a component of accumulated other comprehensive income and is recognized in earnings at the time the hedged item affects earnings, in the same line item as the underlying hedged item. The contracts are scheduled to mature within two years. For the twelve months ended December 31, 2017, the amount reclassified into income was $0.4 million.

Other Activities The Company enters into certain derivative contracts in accordance with its risk management strategy that do not meet the criteria for hedge accounting but which have the impact of largely mitigating foreign currency exposure. These foreign exchange contracts are accounted for on a full mark to market basis through earnings, with gains and losses recorded as a component of other expense, net. The net unrealized gain related to these contracts was $2.1 million for the twelve months ended December 31, 2017. The notional amount and fair value of foreign exchange contracts that did not meet the criteria for hedge accounting at December 31, 2017 was not material. These contracts are scheduled to mature within one year.

The following table summarizes the gross notional amounts and fair values of the designated and non-designated hedged discussed in the above sections:

In millions	Designated	Non-Designated	Total
Gross notional amount	$ 805.1	$ 379.7	$ 1,184.8
Fair Value:			
Other current assets	3.5	2.1	5.6
Other current liabilities	—	—	—
Total	$ 3.5	$ 2.1	$ 5.6

Interest Rate Hedging The Company uses interest rate swaps to manage interest rate exposures. The Company is exposed to interest rate volatility with regard to existing floating rate debt. Primary exposure includes the London Interbank Offered Rates (LIBOR). Derivatives used to hedge risk associated with changes in the fair value of certain variable-rate debt are primarily designated as fair value hedges. Consequently, changes in the fair value of these derivatives, along with changes in the fair value of debt obligations are recognized in current period earnings. See long-term debt footnote fair value measurement footnote for further information on current interest rate swaps.

As of December 31, 2017, the Company has recorded a current liability of $1.2 million and an accumulated other comprehensive loss of $0.7 million, net of tax, related to these agreements.

18. FAIR VALUE MEASUREMENT AND FAIR VALUE OF FINANCIAL INSTRUMENTS

ASC 820 "Fair Value Measurements and Disclosures" defines fair value, establishes a framework for measuring fair value and explains the related disclosure requirements. ASC 820 indicates, among other things, that a fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability and defines fair value based upon an exit price model.

Valuation Hierarchy. ASC 820 establishes a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. Level 3 inputs are unobservable inputs based on the Company's assumptions used to measure assets and liabilities at fair value. A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following table provides the liabilities carried at fair value measured on a recurring basis as of December 31, 2017, which are included in other current liabilities on the Consolidated Balance sheet:

		Fair Value Measurements at December 31, 2017 Using		
In thousands	Total Carrying Value at December 31, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Interest rate swap agreements	1,163	—	1,163	—
Total	$ 1,163	$ —	$ 1,163	$ —

The following table provides the liabilities carried at fair value measured on a recurring basis as of December 31, 2016, which are included in other current liabilities on the Consolidated Balance sheet:

		Fair Value Measurements at December 31, 2016 Using		
In thousands	Total Carrying Value at December 31, 2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Interest rate swap agreements	3,888	—	3,888	—
Total	$ 3,888	$ —	$ 3,888	$ —

To reduce the impact of interest rate changes on a portion of its variable-rate debt, the Company entered into interest rate swaps which effectively converted a portion of the debt from variable to fixed-rate borrowings during the term of the swap contracts. For certain derivative contracts whose fair values are based upon trades in liquid markets, such as interest rate swaps, valuation model inputs can generally be verified and valuation techniques do not involve significant management judgment. The fair values of such financial instruments are generally classified within Level 2 of the fair value hierarchy.

As a result of our global operating activities the Company is exposed to market risks from changes in foreign currency exchange rates, which may adversely affect our operating results and financial position. When deemed appropriate, the Company minimizes these risks through entering into foreign currency forward contracts. The foreign currency forward contracts are valued using broker quotations, or market transactions in either the listed or over-the counter markets. As such, these derivative instruments are classified within level 2.

The Company's cash and cash equivalents are highly liquid investments purchased with an original maturity of three months or less and are considered Level 1 on the fair value valuation hierarchy. The fair value of cash and cash equivalents approximated the carrying value at December 31, 2017 and December 31, 2016. The Company's defined benefit pension plan assets consist primarily of equity security funds, debt security funds and temporary cash and cash equivalent investments. These investments are comprised of a number of investment funds that invest in a diverse portfolio of assets including equity securities, corporate and governmental bonds, and money markets. Trusts are valued at the net asset value ("NAV") as determined by their custodian. NAV represents the accumulation of the unadjusted quoted close prices on the reporting date for the underlying investments divided by the total shares outstanding at the reporting dates. The 2013 and 2016 Notes are considered Level 2 based on the fair value valuation hierarchy.

The estimated fair values and related carrying values of the Company's financial instruments are as follows:

	December 31, 2017		December 31, 2016	
In thousands	**Carry Value**	**Fair Value**	**Carry Value**	**Fair Value**
Interest rate swap agreements	$ 1,163	$ 1,163	$ 3,888	$ 3,888
4.375% Senior Notes	248,567	262,033	248,310	260,265
3.45% Senior Notes	747,655	741,113	747,474	719,273

The fair value of the Company's interest rate swap agreements and the 2013 and 2016 Notes were based on dealer quotes and represent the estimated amount the Company would pay to the counterparty to terminate the agreement.

19. COMMITMENTS AND CONTINGENCIES

The Company is subject to a variety of environmental laws and regulations governing discharges to air and water, the handling, storage and disposal of hazardous or solid waste materials and the remediation of contamination associated with releases of hazardous substances. The Company believes its operations currently comply in all material respects with all of the various environmental laws and regulations applicable to our business; however, there can be no assurance that environmental requirements will not change in the future or that we will not incur significant costs to comply with such requirements.

Under terms of the purchase agreement and related documents for the 1990 Acquisition, American Standard, Inc., now known as Trane ("Trane"), has indemnified the Company for certain items including, among other things, certain environmental claims the Company asserted prior to 2000. If Trane was unable to honor or meet these indemnifications, the Company would be responsible for such items. In the opinion of Management, Trane currently has the ability to meet its indemnification obligations.

Claims have been filed against the Company and certain of its affiliates in various jurisdictions across the United States by persons alleging bodily injury as a result of exposure to asbestos-containing products. Most of these claims have been made against our wholly owned subsidiary, Railroad Friction Products Corporation ("RFPC"), and are based on a product sold by RFPC prior to the time that the Company acquired any interest in RFPC.

Most of these claims, including all of the RFPC claims, are submitted to insurance carriers for defense and indemnity or to non-affiliated companies that retain the liabilities for the asbestos-containing products at issue. We cannot, however, assure that all these claims will be fully covered by insurance or that the indemnitors or insurers will remain financially viable. Our ultimate legal and financial liability with respect to these claims, as is the case with other pending litigation, cannot be estimated.

It is management’s belief that the potential range of loss for asbestos-related bodily injury cases is not reasonably determinable at present due to a variety of factors, including: (1) the asbestos case settlement history of the Company’s wholly owned subsidiary, RFPC; (2) the unpredictable nature of personal injury litigation in general; and (3) the uncertainty of asbestos litigation in particular. Despite this uncertainty, and although the results of the Company’s operations and cash flows for any given period could be adversely affected by asbestos-related lawsuits, Management believes that the final resolution of the Company’s asbestos-related cases will not be material to the Company’s overall financial position, results of operations and cash flows. In general, this belief is based upon: (1) Wabtec’s and RFPC’s history of settlements and dismissals of asbestos-related cases to date; (2) the inability of many plaintiffs to establish any exposure or causal relationship to RFPC’s product; and (3) the inability of many plaintiffs to demonstrate any identifiable injury or compensable loss.

More specifically, as to RFPC, management’s belief that any losses due to asbestos-related cases would not be material is also based on the fact that RFPC owns insurance which provides coverage for asbestos-related bodily injury claims. To date, RFPC’s insurers have provided RFPC with defense and indemnity in these actions. The overall number of new claims being filed against RFPC has dropped significantly in recent years; however, these new claims, and all previously filed claims, may take a significant period of time to resolve. As to Wabtec and its divisions, Management’s belief that asbestos-related cases will not have a material impact is also based on its position that it has no legal liability for asbestos-related bodily injury claims, and that the former owners of Wabtec’s assets retained asbestos liabilities for the products at issue. To date, Wabtec has been able to successfully defend itself on this basis, including two arbitration decisions and a judicial opinion, all of which confirmed Wabtec’s position that it did not assume any asbestos liabilities from the former owners of certain Wabtec assets. Although Wabtec has incurred defense and administrative costs in connection with asbestos bodily injury actions, these costs have not been material, and the Company has no information that would suggest these costs would become material in the foreseeable future.

On April 21, 2016, Siemens Industry, Inc. filed a lawsuit against the Company in federal district court in Delaware alleging that the Company has infringed seven patents owned by Siemens, all of which relate to Positive Train Control technology. On November 2, 2016, Siemens amended its complaint to add six additional patents they also claim are infringed by the Company’s Positive Train Control Products. The Company has filed Answers, and asserted counterclaims, in response to Siemens’ complaints. The case is still in the preliminary stages, but the Company has begun filing for Inter-Parties Review proceedings before the U.S. Patent & Trademark Office seeking to invalidate the Siemens patents. Wabtec believes the claims are without merit and is vigorously defending itself.

Xorail, Inc., a wholly owned subsidiary of the Company (“Xorail”), has received notices from Denver Transit Constructors (“Denver Transit”) alleging breach of contract related to the operating of constant warning wireless crossings, and late delivery of the Train Management & Dispatch System (“TMDS”) for the Denver Eagle P3 Project, which is owned by the Denver Regional Transit District ("RTD"). No damages have been asserted for the alleged late delivery of the TMDS, and Xorail is in the final stages of successfully implementing a recovery plan concerning the TMDS issues. With regard to the wireless crossings, as of September 8, 2017, Denver Transit alleged that total damages were $36.8 million through July 31, 2017, and are continuing to accumulate. The crossings have not been certified for use without flaggers, which Denver Transit alleges is due to Xorail's failure to achieve constant warning times satisfactory to the Federal Railway Administration ("FRA") and the Public Utility Commission ("PUC"). No claims have been filed by Denver Transit with regard to either issue. Xorail has denied Denver Transit’s assertions regarding the wireless crossings, and Denver Transit has also notified RTD that Denver Transit considers the new certification requirements imposed by FRA and/or PUC as a change in law, for which neither Denver Transit nor its subcontractors are liable. Xorail has worked with Denver Transit to modify its system to meet the FRA’s and PUC's previously undefined, and evolving, certification requirements. On September 28, 2017, the FRA granted a 5 year approval of the modified wireless crossing system as currently implemented; however, the PUC has not granted approval of the modified system and therefore the crossings are still not certified for use without flaggers. Denver Transit and RTD are continuing to seek approval from PUC. The Company does not believe that it has any liability with respect to the wireless crossing issue.

From time to time the Company is involved in litigation relating to claims arising out of its operations in the ordinary course of business. As of the date hereof, the Company is involved in no litigation that the Company believes will have a material adverse effect on its financial condition, results of operations or liquidity.

20. SEGMENT INFORMATION

Wabtec has two reportable segments—the Freight Segment and the Transit Segment. The key factors used to identify these reportable segments are the organization and alignment of the Company’s internal operations, the nature of the products and services, and customer type. The business segments are:

Freight Segment primarily manufactures and services components for new and existing freight cars and locomotives, builds new switcher locomotives, rebuilds freight locomotives, supplies railway electronics, positive train control equipment, signal design and engineering services, and provides related heat exchange and cooling systems. Customers include large, publicly traded railroads, leasing companies, manufacturers of original equipment such as locomotives and freight cars, and utilities.

Transit Segment primarily manufactures and services components for new and existing passenger transit vehicles, typically regional trains, high speed trains, subway cars, light-rail vehicles and buses, builds new commuter locomotives, refurbishes subway cars, provides heating, ventilation, and air conditioning equipment, and doors for buses and subways. Customers include public transit authorities and municipalities, leasing companies, and manufacturers of subway cars and buses around the world.

The Company evaluates its business segments' operating results based on income from operations. Intersegment sales are accounted for at prices that are generally established by reference to similar transactions with unaffiliated customers. Corporate activities include general corporate expenses, elimination of intersegment transactions, interest income and expense and other unallocated charges. Since certain administrative and other operating expenses and other items have not been allocated to business segments, the results in the following tables are not necessarily a measure computed in accordance with generally accepted accounting principles and may not be comparable to other companies.

Segment financial information for 2017 is as follows:

In thousands	**Freight Segment**	**Transit Segment**	**Corporate Activities and Elimination**	**Total**
Sales to external customers	$ 1,396,588	$ 2,485,168	$ —	$ 3,881,756
Intersegment sales/(elimination)	37,630	21,548	(59,178)	—
Total sales	$ 1,434,218	$ 2,506,716	$ (59,178)	$ 3,881,756
Income (loss) from operations	$ 264,603	$ 188,546	$ (31,416)	$ 421,733
Interest expense and other, net	—	—	(69,670)	(69,670)
Income (loss) from operations before income taxes	$ 264,603	$ 188,546	$ (101,086)	$ 352,063
Depreciation and amortization	$ 43,721	$ 57,441	$ 2,086	$ 103,248
Capital expenditures	33,921	50,762	4,783	89,466
Segment assets	3,504,289	7,562,122	(4,486,431)	6,579,980

Segment financial information for 2016 is as follows:

In thousands	**Freight Segment**	**Transit Segment**	**Corporate Activities and Elimination**	**Total**
Sales to external customers	$ 1,543,098	$ 1,388,090	$ —	$ 2,931,188
Intersegment sales/(elimination)	39,519	9,393	(48,912)	$ —
Total sales	$ 1,582,617	$ 1,397,483	$ (48,912)	$ 2,931,188
Income (loss) from operations	$ 344,455	$ 171,446	$ (57,540)	$ 458,361
Interest expense and other, net	—	—	(45,524)	(45,524)
Income (loss) from operations before income taxes	$ 344,455	$ 171,446	$ (103,064)	$ 412,837
Depreciation and amortization	$ 36,519	$ 31,545	$ 1,731	$ 69,795
Capital expenditures	22,726	20,987	6,503	50,216
Segment assets	2,949,668	6,720,302	(3,088,952)	6,581,018

Segment financial information for 2015 is as follows:

In thousands	**Freight Segment**	**Transit Segment**	**Corporate Activities and Elimination**	**Total**
Sales to external customers	$ 2,054,715	$ 1,235,283	$ —	$ 3,307,998
Intersegment sales/(elimination)	35,372	10,895	(46,267)	—
Total sales	$ 2,090,087	$ 1,264,178	$ (46,267)	$ 3,307,998
Income (loss) from operations	$ 482,640	$ 150,988	$ (26,061)	$ 607,567
Interest expense and other, net	—	—	(22,199)	(22,199)
Income (loss) from operations before income taxes	$ 482,640	$ 150,988	$ (48,260)	$ 585,368
Depreciation and amortization	$ 36,834	$ 26,196	$ 1,704	$ 64,734
Capital expenditures	24,715	22,996	1,717	49,428
Segment assets	2,708,724	2,202,614	(1,681,825)	3,229,513

The following geographic area data as of and for the years ended December 31, 2017, 2016 and 2015, respectively, includes net sales based on product shipment destination and long-lived assets, which consist of plant, property and equipment, net of depreciation, resident in their respective countries:

In thousands	Net Sales			Long-Lived Assets		
	2017	2016	2015	2017	2016	2015
United States	$ 1,323,781	$ 1,362,255	$ 1,754,924	$ 211,608	$ 205,895	$ 171,362
United Kingdom	356,493	322,563	368,505	57,668	54,215	63,694
Canada	279,013	206,258	204,674	5,822	5,156	4,876
France	237,454	66,287	45,565	57,849	33,636	7,194
Germany	208,817	98,364	92,422	71,709	57,902	31,642
China	178,137	106,357	100,586	36,388	42,672	12,256
Mexico	160,029	183,583	190,034	9,117	8,766	8,839
Italy	142,037	45,771	38,164	30,329	27,253	15,170
India	137,837	24,161	12,345	12,519	1,271	1,946
Australia	136,127	82,099	86,809	10,483	8,039	8,424
Brazil	69,378	51,493	84,595	13,184	13,227	9,318
Other international	652,653	381,997	329,375	57,296	60,344	18,472
Total	$ 3,881,756	$ 2,931,188	$ 3,307,998	$ 573,972	$ 518,376	$ 353,193

Export sales from the Company's United States operations were $448.0 million, $470.5 million and $508.4 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Sales by product are as follows:

In thousands	2017	2016	2015
Specialty Products & Electronics	$ 1,350,727	$ 1,374,580	$ 1,733,881
Brake Products	749,959	588,081	627,552
Remanufacturing, Overhaul & Build	522,275	559,284	606,624
Transit Products	1,112,340	276,124	189,581
Other	146,455	133,119	150,360
Total sales	$ 3,881,756	$ 2,931,188	$ 3,307,998

21. GUARANTOR SUBSIDIARIES FINANCIAL INFORMATION

The obligations under the Company's 2016 Notes, 2013 Notes and Revolving Credit Facility and Term Loan are fully and unconditionally guaranteed by all U.S. subsidiaries as guarantors. Each guarantor is 100% owned by the parent company. In accordance with positions established by the Securities and Exchange Commission, the following shows separate financial information with respect to the parent, the guarantor subsidiaries and the non-guarantor subsidiaries. The principal elimination entries eliminate investment in subsidiaries and certain intercompany balances and transactions.

Balance Sheet for December 31, 2017:

In thousands	Parent	Guarantors	Non-Guarantors	Elimination	Consolidated
Cash and cash equivalents	$ 933	$ 4,802	$ 227,666	$ —	$ 233,401
Receivables, net	77,046	237,360	852,381	—	1,166,787
Inventories	120,937	137,972	483,725	—	742,634
Current assets - other	1,142	4,507	116,642	—	122,291
Total current assets	200,058	384,641	1,680,414	—	2,265,113
Property, plant and equipment	52,532	136,382	385,058	—	573,972
Goodwill	25,274	546,527	1,888,302	—	2,460,103
Investment in subsidiaries	6,517,205	2,570,391	—	(9,087,596)	—
Other intangibles, net	30,575	251,347	922,510	—	1,204,432
Other long term assets	17,414	295	58,651	—	76,360
Total assets	$ 6,843,058	$ 3,889,583	$ 4,934,935	$ (9,087,596)	$ 6,579,980
Current liabilities	$ 196,827	217,176	$ 1,159,327	—	$ 1,573,330
Inter-company	2,121,546	(2,026,634)	(94,912)	—	—
Long-term debt	1,661,771	14	161,518	—	1,823,303
Long-term liabilities - other	54,046	67,824	232,945	—	354,815
Total liabilities	4,034,190	(1,741,620)	1,458,878	—	3,751,448
Shareholders' equity	2,808,868	5,632,665	3,454,931	(9,087,596)	2,808,868
Non-controlling interest	—	(1,462)	21,126	—	19,664
Total shareholders' equity	$ 2,808,868	$ 5,631,203	$ 3,476,057	$ (9,087,596)	$ 2,828,532
Total Liabilities and Shareholders' Equity	$ 6,843,058	$ 3,889,583	$ 4,934,935	$ (9,087,596)	$ 6,579,980

Balance Sheet for December 31, 2016:

In thousands	Parent	Guarantors	Non-Guarantors	Elimination	Consolidated
Cash and cash equivalents	$ 2,522	$ 9,496	$ 386,466	$ —	$ 398,484
Receivables, net	79,041	202,779	660,688	—	942,508
Inventories	120,042	128,076	410,392	—	658,510
Current assets - other	52,576	(17,844)	833,397	—	868,129
Total current assets	254,181	322,507	2,290,943	—	2,867,631
Property, plant and equipment	49,031	126,661	342,684	—	518,376
Goodwill	25,275	477,472	1,576,018	—	2,078,765
Investment in subsidiaries	5,388,613	1,325,150	—	(6,713,763)	—
Other intangibles, net	31,897	204,512	817,451	—	1,053,860
Other long term assets	9,592	(1,914)	54,708	—	62,386
Total assets	$ 5,758,589	$ 2,454,388	$ 5,081,804	$ (6,713,763)	$ 6,581,018
Current liabilities	$ 194,983	196,956	$ 1,054,700	—	$ 1,446,639
Inter-company	1,562,399	(1,848,777)	286,378	—	—
Long-term debt	1,761,933	58	976	—	1,762,967
Long-term liabilities - other	33,298	74,977	286,312	—	394,587
Total liabilities	3,552,613	(1,576,786)	1,628,366	—	3,604,193
Shareholders' equity	2,205,976	4,032,250	2,681,514	(6,713,763)	2,205,977
Non-controlling interest	—	(1,076)	771,924	—	770,848
Total shareholders' equity	$ 2,205,976	$ 4,031,174	$ 3,453,438	$ (6,713,763)	$ 2,976,825
Total Liabilities and Shareholders' Equity	$ 5,758,589	$ 2,454,388	$ 5,081,804	$ (6,713,763)	$ 6,581,018

Income Statement for the Year Ended December 31, 2017:

In thousands	Parent	Guarantors	Non-Guarantors	Elimination	Consolidated
Net Sales	$ 577,397	$ 1,067,954	$ 2,378,817	$ (142,412)	$ 3,881,756
Cost of sales	(440,911)	(675,546)	(1,808,370)	108,384	(2,816,443)
Gross profit (loss)	136,486	392,408	570,447	(34,028)	1,065,313
Total operating expenses	(113,872)	(123,423)	(406,285)	—	(643,580)
Income (loss) from operations	22,614	268,985	164,162	(34,028)	421,733
Interest (expense) income, net	(72,233)	8,843	(5,314)	—	(68,704)
Other income (expense), net	5,103	289	(6,358)	—	(966)
Equity earnings (loss)	416,068	131,620	—	(547,688)	—
Pretax income (loss)	371,552	409,737	152,490	(581,716)	352,063
Income tax expense	(109,294)	32,393	(12,872)	—	(89,773)
Net income (loss)	262,258	442,130	139,618	(581,716)	262,290
Less: Net income attributable to noncontrolling interest	—	386	(415)	—	(29)
Net income (loss) attributable to Wabtec shareholders	$ 262,258	$ 442,516	$ 139,203	$ (581,716)	$ 262,261
Comprehensive income (loss) attributable to Wabtec shareholders	$ 263,907	$ 442,516	$ 472,167	$ (581,716)	$ 596,874

Income Statement for the Year Ended December 31, 2016:

In thousands	Parent	Guarantors	Non-Guarantors	Elimination	Consolidated
Net Sales	$ 641,809	$ 1,112,001	$ 1,322,937	$ (145,559)	$ 2,931,188
Cost of sales	(473,700)	(708,062)	(928,608)	103,421	(2,006,949)
Gross profit (loss)	168,109	403,939	394,329	(42,138)	924,239
Total operating expenses	(141,940)	(122,617)	(201,321)	—	(465,878)
(Loss) income from operations	26,169	281,322	193,008	(42,138)	458,361
Interest (expense) income, net	(34,975)	7,012	(14,598)	—	(42,561)
Other income (expense), net	20,509	(2,284)	(21,188)	—	(2,963)
Equity earnings (loss)	322,650	131,234	—	(453,884)	—
Pretax income (loss)	334,353	417,284	157,222	(496,022)	412,837
Income tax expense	(29,466)	(57,667)	(12,300)	—	(99,433)
Net income (loss)	304,887	359,617	144,922	(496,022)	313,404
Less: Net income attributable to noncontrolling interest	—	—	(8,517)	—	(8,517)
Net income attributable to Wabtec shareholders	$ 304,887	$ 359,617	$ 136,405	$ (496,022)	$ 304,887
Comprehensive income (loss) attributable to Wabtec shareholders	$ 305,180	$ 359,617	$ 33,226	$ (496,022)	$ 202,001

Income Statement for the Year Ended December 31, 2015:

In thousands	Parent	Guarantors	Non-Guarantors	Elimination	Consolidated
Net Sales	$ 743,262	$ 1,436,935	$ 1,300,577	$ (172,776)	$ 3,307,998
Cost of sales	(531,269)	(843,104)	(976,798)	90,989	(2,260,182)
Gross (loss) profit	211,993	593,831	323,779	(81,787)	1,047,816
Total operating expenses	(142,953)	(131,251)	(166,045)	—	(440,249)
(Loss) income from operations	69,040	462,580	157,734	(81,787)	607,567
Interest (expense) income, net	(23,129)	5,914	327	—	(16,888)
Other income (expense), net	23,193	(9,140)	(19,364)	—	(5,311)
Equity earnings (loss)	506,903	112,286	—	(619,189)	—
Pretax income (loss)	576,007	571,640	138,697	(700,976)	585,368
Income tax expense	(177,379)	8,989	(18,350)	—	(186,740)
Net income (loss)	398,628	580,629	120,347	(700,976)	398,628
Less: Net income attributable to noncontrolling interest	—	—	—	—	—
Net income attributable to Wabtec shareholders	$ 398,628	$ 580,629	$ 120,347	$ (700,976)	$ 398,628
Comprehensive income (loss) attributable to Wabtec shareholders	$ 409,734	$ 580,629	$ (7,992)	$ (700,976)	$ 281,395

Condensed Statement of Cash Flows for the year ended December 31, 2017:

In thousands	**Parent**	**Guarantors**	**Non-Guarantors**	**Elimination**	**Consolidated**
Net cash (used in) provided by operating activities	$ (49,231)	$ 249,204	$ 22,866	$ (34,028)	$ 188,811
Net cash used in investing activities	(11,156)	(120,661)	(143,912)	—	(275,729)
Net cash provided by (used in) financing activities	58,798	(133,237)	(57,020)	34,028	(97,431)
Effect of changes in currency exchange rates	—	—	19,266	—	19,266
Increase (decrease) in cash	(1,589)	(4,694)	(158,800)	—	(165,083)
Cash, beginning of year	2,522	9,496	386,466	—	398,484
Cash, end of year	$ 933	$ 4,802	$ 227,666	$ —	$ 233,401

Condensed Statement of Cash Flows for the year ended December 31, 2016:

In thousands	**Parent**	**Guarantors**	**Non-Guarantors**	**Elimination**	**Consolidated**
Net cash provided by (used in) operating activities	$ (44,611)	$ 332,822	$ 204,457	$ (42,138)	$ 450,530
Net cash used in investing activities	(829,783)	(14,725)	69,443	—	(775,065)
Net cash (used in) provided by financing activities	876,916	(321,758)	(74,325)	42,138	522,971
Effect of changes in currency exchange rates	—	—	(26,143)	—	(26,143)
(Decrease) increase in cash	2,522	(3,661)	173,432	—	172,293
Cash, beginning of year	—	13,157	213,034	—	226,191
Cash, end of year	$ 2,522	$ 9,496	$ 386,466	$ —	$ 398,484

Condensed Statement of Cash Flows for the year ended December 31, 2015:

In thousands	**Parent**	**Guarantors**	**Non-Guarantors**	**Elimination**	**Consolidated**
Net cash provided by (used in) operating activities	$ (90,374)	$ 487,516	$ 135,489	$ (81,787)	$ 450,844
Net cash used in investing activities	(7,862)	(109,326)	(262,948)	—	(380,136)
Net cash provided by (used in) financing activities	(48,570)	(378,330)	93,615	81,787	(251,498)
Effect of changes in currency exchange rates	—	—	(18,868)	—	(18,868)
Increase in cash	(146,806)	(140)	(52,712)	—	(199,658)
Cash, beginning of year	146,806	13,297	265,746	—	425,849
Cash, end of year	$ —	$ 13,157	$ 213,034	$ —	$ 226,191

22. OTHER (EXPENSE) INCOME, NET

The components of other (expense) income, net are as follows:

In thousands	**For the year ended December 31, 2017**	**2016**	**2015**
Foreign currency loss	$ (6,618)	$ (4,001)	$ (4,659)
Equity income	2,579	409	—
Other miscellaneous income (expense)	3,073	629	(652)
Total other (expense) income, net	$ (966)	$ (2,963)	$ (5,311)

23. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

In thousands, except per share data	First Quarter	Second Quarter	Third Quarter	Fourth Quarter (1)
2017				
Net sales	$ 916,034	$ 932,253	$ 957,931	$ 1,075,538
Gross profit	269,707	273,963	253,203	268,440
Income from operations	114,858	113,701	102,011	91,163
Net income attributable to Wabtec shareholders	73,889	72,025	67,399	48,948
Basic earnings from operations per common share	$ 0.77	$ 0.75	$ 0.70	$ 0.51
Diluted earnings from operations per common share	$ 0.77	$ 0.75	$ 0.70	$ 0.51
2016				
Net sales	$ 772,031	$ 723,601	$ 675,574	$ 759,982
Gross profit	255,180	237,389	212,481	219,189
Income from operations	142,181	133,284	120,096	62,800
Net income attributable to Wabtec shareholders	94,163	90,485	82,428	46,328
Basic earnings from operations per common share	$ 1.03	$ 1.00	$ 0.92	$ 0.42
Diluted earnings from operations per common share	$ 1.02	$ 1.00	$ 0.91	$ 0.42

(1) Results from the fourth quarter of 2017 include project adjustments related to prior periods which decreased income from operations by approximately $14.8 million. The effect of these project adjustments was not material.

The Company operates on a four-four-five week accounting quarter, and the quarters end on or about March 31, June 30 and September 30. The fiscal year ends on December 31.

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION

VALUATION AND QUALIFYING ACCOUNTS
For each of the three years ended December 31

In thousands	Balance at beginning of period	Charged/ (credited) to expense	Charged/ (credited) to other accounts (1)	Deductions from reserves (2)	Balance at end of period
2017					
Warranty and overhaul reserves	$ 138,992	$ 50,385	$ 12,234	$ 48,548	$ 153,063
Allowance for doubtful accounts	7,340	2,632	4,979	2,609	12,342
Valuation allowance-taxes	21,418	6,760	—	10,024	18,154
2016					
Warranty and overhaul reserves	$ 92,064	$ 28,947	$ 56,753	$ 38,772	$ 138,992
Allowance for doubtful accounts	5,614	3,635	—	1,909	7,340
Valuation allowance-taxes	12,623	3,405	5,390	—	21,418
2015					
Warranty and overhaul reserves	$ 87,849	$ 35,418	$ (1,762)	$ 29,441	$ 92,064
Allowance for doubtful accounts	6,270	2,026	—	2,682	5,614
Valuation allowance-taxes	1,818	7,024	3,781	—	12,623

(1) Reserves of acquired/(sold) companies; valuation allowances for state and foreign deferred tax assets; impact of fluctuations in foreign currency exchange rates.
(2) Actual disbursements and/or charges.

Item 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

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

WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION

Date: February 26, 2018

By: /S/ RAYMOND T. BETLER

Raymond T. Betler,
President and 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 Company and in the capacities and on the dates indicated.

	Signature and Title	Date
By	/S/ ALBERT J. NEUPAVER **Albert J. Neupaver,** **Chairman of the Board**	February 26, 2018
By	/S/ RAYMOND T. BETLER **Raymond T. Betler,** **President and Chief Executive Officer and Director (Principal Executive Officer)**	February 26, 2018
By	/S/ PATRICK D. DUGAN **Patrick D. Dugan,** **Executive Vice President Finance and Chief Financial Officer (Principal Financial Officer)**	February 26, 2018
By	/S/ JOHN A. MASTALERZ **John A. Mastalerz,** **Senior Vice President and Principal Accounting Officer**	February 26, 2018
By	/S/ WILLIAM E. KASSLING **William E. Kassling,** **Lead Director**	February 26, 2018
By	/S/ PHILIPPE ALFROID **Philippe Alfroid,** **Director**	February 26, 2018
By	/S/ ROBERT J. BROOKS **Robert J. Brooks,** **Director**	February 26, 2018
By	/S/ ERWAN FAIVELEY **Erwan Faiveley,** **Director**	February 26, 2018

By	/S/ EMILIO A. FERNANDEZ **Emilio A. Fernandez,** **Director**	February 26, 2018
By	/S/ LEE B. FOSTER, II **Lee B. Foster, II,** **Director**	February 26, 2018
By	/S/ LINDA S. HARTY **Linda S. Harty,** **Director**	February 26, 2018
By	/S/ BRIAN P. HEHIR **Brian P. Hehir,** **Director**	February 26, 2018
By	/S/ MICHAEL W. D. HOWELL **Michael W. D. Howell,** **Director**	February 26, 2018
By	/S/ STEPHANE RAMBAUD-MEASSON **Stephane Rambaud-Measson,** **Director**	February 26, 2018
By	/S/ NICKOLAS W. VANDE STEEG **Nickolas W. Vande Steeg,** **Director**	February 26, 2018

Exhibit 21

SUBSIDIARIES AND AFFILIATES

Company	Jurisdiction of Incorporation	Ownership Interest
A and M Signalling Services Private Limited	India	100%
Advanced Global Environmental LLC	Atlantic Beach, Florida	55%
Aero Transportation Products, Inc	Independence, Missouri	100%
Akapp-Stemmann BV	Ede, Netherlands	100%
AM General Contractors SpA	Genova, Italy	100%
A M Rail Group Limited	Burton-on-Trent, UK	100%
A M Signalling Design Limited	Burton-on-Trent, UK	100%
Ateliers Hubert Gerken S.A.	Belgium	100%
Austbreck Pty, Ltd.	Hallam, Victoria, Australia	100%
Barber Steel Foundry Corp.	Rothbury, Michigan	100%
Barber Tian Rui Railway Supply LLC	Park Ridge, IL	50%
Bearward Limited	Northampton, UK	100%
Bearward Engineering Limited	Northampton, UK	100%
Becorit GmbH	Recklinghausen,Germany	100%
Beijing Wabtec Huaxia Technology Company Ltd.	Beijing, China	100%
Brecknell Willis & Co., Ltd.	Char, Somerset, UK	100%
Brecknell Willis Composites, Ltd.	Char, Somerset, UK	100%
Brecknell Willis (Tianjin) Electrification Systems, Co., Ltd.	TianJin, China	100%
Brecknell Willis Stemmann (Tianjin) Electrification Systems, Co., Ltd.	TianJin, China	100%
Cambridge Forming and Cutting Ltd	Ontario, Canada	100%
CoFren S.A.S.	Vierzon, France	100%
CoFren S.r.l.	Avellino, Italy	100%
Coleman Hydraulics Limited	Burton-on-Trent, UK	100%
CZ-Carbon Prodcuts s.r.o.	Czech Republic	100%
Datong Faiveley Railway Vehicle Equipment Co. Ltd	Datong City6, China	50%
Dia-Frag Industria e Comercio de Motopecas Ltda.	Monte Alto, Brazil	100%
Durox Company	Strongville, Ohio	100%
E-Carbon Asia Sdn. Bhd.	China	50%
E-Carbon China Co., Ltd.	China	70%
E-Carbon Far East Limited	Hong Kong	100%
E-Carbon Far East Ltd. Shanghai	Shanghai, China	60%
E-Carbon H.K. Limited	Hong Kong	70%
E-Carbon S.A.	Belgium	100%
Electrical Carbon UK Limited	United Kingdom	100%
Ellcon Drive LLC	Greenville, South Carolina	100%
Evand Pty Ltd.	Wetherill Park, NSW, Australia	100%
Faiveley Mapna Pars Rail	Karaj, Iran	51%
Faiveley Rail Engineering Singapore Pte Ltd	Singapore	50%
Faiveley Transport Amiens	Amiens, France	100%
Faiveley Transport Asia Pacific Ltd.	Hong Kong	100%
Faiveley Transport Australia Ltd.	Rosehill, NSW, Australia	100%
Faiveley Transport Birkenhead Ltd.	Birkenhead, UK	100%
Faiveley Transport Canada Inc.	Montreal, Canada	100%
Faiveley Transport Czech a.s.	Blovice, Czech Republic	100%
Faiveley Transport Chile Ltda.	Santiago, Chile	100%

Company	Jurisdiction of Incorporation	Ownership Interest
Faiveley Transport DO Brasil Ltda.	Sao Paulo, Brazil	100%
Faiveley Transport Far East Ltd	Hong Kong	100%
Faiveley Transport Holding Gmbh & co KG	Whitten, Germany	100%
Faiveley Transport Iberica SA	La Selva del Camp, Spain	100%
Faiveley Transport Italia Spa	Turin, Italy	98.7%
Faiveley Transport Korea Co. Ltd	Seoul, Korea	100%
Faiveley Transport Leipzig GmbH & Co-KG	Scheuditz, Germany	100%
Faiveley Transport Malmo AB	Landskrona, Sweden	100%
Faiveley Transport Metro Technology Shanghai Co Ltd.	Shanghai, China	100%
Faiveley Transport Metro Technology Taiwan Ltd.	Taipei, Taiwan	100%
Faiveley Transport Metro Technology Thailand Co Ltd.	Bangkok, Thailand	100%
Faiveley Transport Nordic AB	Landskrona, Sweden	100%
Faiveley Transport North America Inc.	Greenville, South Carolina	100%
Faiveley Transport Nowe GmbH	Elze, Germany	100%
Faiveley Transport NSF	Neuville en Ferrain, France	100%
Faiveley Transport Plezn s.r.o.	Nyrany, Chech Republic	100%
Faiveley Transport Polska zoo	Poznan, Poland	100%
Faiveley Transport Rail Technologies India Ltd.	Himachal Pradesh, India	100%
Faiveley Transport Railway Trading Co. Ltd	Shanghai, China	100%
Faiveley Transport S.A.	Gennevilliers, France	100%
Faiveley Transport Schwab AG	Schaffhausen, Switzerland	100%
Faiveley Transport Schweiz AG	Hagendorf, Switzerland	100%
Faiveley Transport Service Maroc	Casablanca, Morocco	100%
Faiveley Transport South Africa Pty (Ltd)	Monument Park, South Africa	100%
Faiveley Transport Systems Technology (Beijing) Co. Ltd.	Beijing, China	100%
Faiveley Transport Tamworth Ltd.	Tamworth, Staffordshire, UK	100%
Faiveley Transport Tours	Saint Pierre des Corps, France	100%
Faiveley Transport Tremosnice s.r.o.	Treomsnice, Czech Republic	100%
Faiveley Transport USA Inc.	Greenville, South Carolina	100%
Faiveley Transport Verwaltungs GmbH	Scheuditz, Germany	100%
Faiveley Transport Witten GmbH	Witten, Germany	100%
F.I.P. Pty Ltd.	Sydney, Australia	100%
Fandstan Electric BV	Ede, Netherlands	100%
Fandstan Electric Group, Ltd.	London, UK	100%
Fandstan Electric Systems Pty, Ltd.	Gujarat, India	100%
Fandstan Electric Systems, Ltd.	London, England	100%
Fandstan Electric, Ltd.	London, UK	100%
Fandstan Electric Systems, Ltd.	London, UK	100%
F.T.M.T. Singapore Pte Ltd.	Singapore	100%
FW Acquisition LLC	Wilmington, Delaware	100%
G&B Specialties, Inc.	Berwick, Pennsylvania	100%
Gerken Group S.A.	Belgium	100%
Gerken Nordiska Karma Aktiebolag	Sweden	49%
Gerken SAS	France	72%
Global Acquisition, S.a r.l.	Luxembourg	100%

Company	Jurisdiction of Incorporation	Ownership Interest
Graham White Manufacturing Company	Salem, Virginia	100%
GT Advanced Engineering and Technologies, Ltd.	Shanghai, China	100%
GT Engineering & Associates, Ltd.	Hong Kong, China	100%
Hubei Dengfeng Unifin Electrical Equipment Cooling System Co., Ltd.	Daye City, Hubei, China	69%
Hunan CSR Wabtec Railway Transportation Technology Co. Ltd.	Changsha, Hunan, China	50%
InTrans Engineering Limited	Kolkata, West Bengal, India	100%
IP09 RCL Corporation	Wilmington, DE	100%
J. & D. Gears Limited	Barton Under Needwood, England	100%
Jiaxiang HK Smart Technology Co. Ltd	Hong Kong, China	100%
Keelex 351 Limited	Barton Under Needwood, England	100%
LH Access Technology Limited	Barton Under Needwood, England	100%
LH Group Holdings Limited	Barton Under Needwood, England	100%
LH Group Services Limited	Barton Under Needwood, England	100%
LH Group Wheelsets Limited	Barton Under Needwood, England	100%
LH Plant (Burton) Limited	Barton, United Kingdom	100%
Longwood Elastomers, Inc.	Wytheville, Virginia	100%
Longwood Elastomers, S.A.	Soria, Spain	100%
Longwood Engineered Products, Inc	Greensboro, North Carolina	100%
Longwood Industries, Inc.	Brenham, Texas	100%
Longwood International, Inc.	Greensboro, North Carolina	100%
LWI Elastomers International, S.L.	Madrid, Spain	100%
LWI International B.V.	Amsterdam, Netherlands	100%
Medagao (Suzhou) Rubber-Metal Components Co., Ltd	Suzhou, Jiangsu, China	100%
Melett (Changzhou) Precision Machinery Co. Limited	Jiangsu, China	100%
Melett Limited	South Yorkshire, England	100%
Melett North America, Inc	Memphis, Tennessee	100%
Melett Polska Spolka z Ograniczona odpowiedzialnoscia	Bydgos	100%
Metalocaucho, S.L.	Urnieta, Gipuzkoa, Spain	100%
Mors Smitt BV	Utrecht, Netherlands	100%
Mors Smitt France S.A.S.	Sable sur Sarthe, France	100%
Mors Smitt Holding S.A.S.	Utrecht, Netherlands	100%
Mors Smitt Netherlands BV	Utrecht, Netherlands	100%
Mors Smitt Technologies, Inc.	Buffalo Grove, IL	100%
Mors Smitt UK Ltd.	West Midlands UK	100%
MorsSmitt Asia, Ltd.	Kwun Tong, Hong Kong	100%
MotivePower, Inc.	Boise, ID	100%
MTC India Rubber Metal Components Private Limited	Bangalore, India	100%
Napier Turbochargers (Holdings) Limited	Lincoln, Lincolnshire, UK	100%
Napier Turbochargers Australia Pty Ltd.	Sydney, NSW, Australia	100%
Napier Turbochargers Limited	Lincoln, Lincolnshire, UK	100%
o.o.o. Faiveley Transport	Leningrad Region, Russia	100%
Orion Engineering Ltd	Hong Kong, China	100%
Pantrac GmbH	Germany	100%
Parts Supply Limited	Leicestershire, England	100%
Poli S.r.l.	Camisano, Italy	100%

Company	Jurisdiction of Incorporation	Ownership Interest
Pride Bodies Ltd	Ontario, Canada	100%
Qingdao Faiveley Sri Rail Brake Co. Ltd.	Qingdao, Shadong, China	50%
Railroad Controls, L.P	Benbrook, TX	100%
Railroad Friction Products Corporation	Maxton, NC	100%
RCL, L.L.C.	Benbrook, TX	100%
RCLP Acquisition LLC	Benbrook, TX	100%
Relay Monitoring Systems Pty Ltd	Mulgrave, Australia	100%
RFPC Holding Corporation	Wilmington, Delaware	100%
Ricon Acquisition Corp.	San Fernando, California	100%
Ricon Corp.	San Fernando, California	100%
SAB Wabco Davies & Metcalfe Ltd.	Birkenhead, UK	100%
SAB Wabco D & M Products Ltd.	Birkenhead, UK	100%
SAB Wabco Investments Ltd.	Birkenhead, UK	100%
SAB Wabco Ltd.	Birkenhead, UK	100%
SAB Wabco Products Ltd.	Birkenhead, UK	100%
SAB Wabco Sharavan	Sharavan, Iran	99%
SAB Wabco UK Ltd.	Birkenhead, UK	100%
Schaefer Equipment, Inc.	Warren, Ohio	100%
SCT Europe Ltd.	Kirkcaldy, Fife, UK	100%
SCT Technology LLC	Wilmington, Delaware	100%
Semvac A/S	Odense, Denmark	100%
Semvac Spare Parts A/S	Odense, Denmark	100%
Shanghai Faiveley Railway Technology Co. Ltd.	Shanghai, China	51%
Shenyang CRRC Wabtec Railway Brake Technology Company, Ltd.	Shenyang, China	50%
Shijiazhuang Jiaxiang Precision Machinery Co. Ltd.	Shijiazhuang, China	100%
Standard Car Truck Company	Park Ridge, IL	100%
Standard Car Truck-Asia, Inc.	Chaoyang District, Beijing	100%
Stemmann Technik France SAS	Buchelay, France	100%
Stemmann-Technik GmbH	Schüttorf, Germany	100%
Stemmann Technik Nederland BV	Rijnsburg, Netherlands	100%
Stemmann Polska SP Zoo	Katy Wroclawskie, Poland	100%
Suecobras Consultoria Ferroviaria Ltda	Rio de Janeiro, Brazil	100%
Thermal Transfer Acquisition Corporation	Duquesne, Pennsylvania	100%
The Vista Corporation of Virginia	Salem, Virginia	100%
TransTech of SC, Inc	Piedmont, South Carolina	100%
Turbonetics Holdings, Inc.	Moorpark, CA	100%
Vapor Europe S.r.l.	Sassuolo, Modena, Italy	100%
Vapor Rail Kapi Sistemleri Ticaret Ve Hizmetleri Limited Sirketi	Istanbul, Turkey	100%
Vapor Ricon Europe Ltd.	Loughborough, Leicestershire, UK	100%
Wabtec Assembly Services S. de R.L. de C.V.	San Luis Potosi, Mexico	100%
Wabtec Australia Pty. Limited	Rydalmere, Australia	100%
Wabtec (Beijing) Corporate Management Co. Ltd.	Beijing, Fengtai District, China	100%
Wabtec Brasil Fabricacoa Manutencao de Equipamentos Ferroviarios Ltda	Juiz de For a, Brazil	100%
Wabtec Corporation	Wilmerding, Pennsylvania	100%
Wabtec Canada, Inc.	Ontario, Canada	100%

Company	Jurisdiction of Incorporation	Ownership Interest
Wabtec China Friction Holding Limited	Hong Kong, China	100%
Wabtec China Rail Products & Services Holding Limited	Hong Kong, China	100%
Wabtec Coöperatief UA	Amsterdam, Netherlands	100%
Wabtec Control Systems Pty Ltd	Osborne Park, WA, Australia	100%
Wabtec de Mexico, S. de R.L. de C.V.	San Luis Potosi, Mexico	100%
Wabtec Equipamentos Ferroviarios Ltda	Sao Paulo, Brazil	100%
Wabtec Europe GmbH	Brunn am Gebirge, Austria	100%
Wabtec France S.A.S.	Paris, France	100%
Wabtec FRG GmbH	Recklinghausen, Germany	100%
Wabtec FRG Holdings GmbH & Co. KG	Recklinghausen, Germany	100%
Wabtec Finance LLC	Wilmington, Delaware	100%
Wabtec Golden Bridge Transportation Technology (Hangzhou) Company, Ltd	Xinwan Town. China	100%
Wabtec Holding Corp.	Wilmington, Delaware	100%
Wabtec India Transportation Private Limited	Kolkata, India	100%
Wabtec International, Inc	Wilmington, Delaware	100%
Wabtec Investments Limited LLC	Wilmington, Delaware	100%
Wabtec Ireland Limited	Dublin, Ireland	100%
Wabtec Jinxin (Wuxi) Heat Exchanger Co., Ltd.	Wuxi City, China	85%
Wabtec Luxembourg, S.a r.l	Luxembourg	100%
Wabtec Manufacturing, LLC	Wilmington, Delaware	100%
Wabtec Manufacturing Mexico S. de R.L. de C.V.	San Luis Potosí, Mexico	100%
Wabtec MZT AD Skopje	Skopje, Macedonia	87%
Wabtec MZT Poland Sp. z.o.o.	Poznan, Poland	100%
Wabtec Netherlands BV	Amsterdam, Netherlands	100%
Wabtec Rail Limited	Doncaster, S.Yorkshire, UK	100%
Wabtec Rail Scotland Limited	Kirkcaldy, Fife, Scotland	100%
Wabtec Railway Electronics Corporation	Halifax, Nova Scotia, Canada	100%
Wabtec Railway Electronics Holdings, LLC	Wilmington, Delaware	100%
Wabtec Railway Electronics Manufacturing, Inc	Wilmington, Delaware	100%
Wabtec Railway Electronics, Inc	Wilmington, Delaware	100%
Wabtec Rus LLC	Moscow, Russia	100%
Wabtec Servicios Administrativos, S.A. de C.V.	San Luis Potosi, Mexico	100%
Wabtec South Africa Proprietary Limited	Kempton Park , South Africa	70%
Wabtec Texmaco Rail Private Limited	Kolkata, India	60%
Wabtec UK Holdings Limited	Staffordshire, England	100%
Wabtec UK Investments Limited	Manchester, England	100%
Wabtec UK Manufacturing Limited	Burton-on-Trent, UK	100%
Wabtec-UWC Ltd.	Limassol, Cyprus	51%
Westinghouse Railway Holdings (Canada) Inc.	Toronto, Ontario, Canada	100%
Wilmerding International Holdings C.V.	Amsterdam, Netherlands	100%
Workhorse Rail, LLC	Pittsburgh, Pennsylvania	100%
Xorail, Inc.	Jacksonville, Florida	100%
Young Touchstone Company	Oak Creek, Wisconsin	100%
Zhongshan MorsSmitt Relay Ltd.	Zhongshan, China	100%

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-53753) pertaining to the 1998 Employee Stock Purchase Plan of Westinghouse Air Brake Technologies Corporation,

(2) Registration Statement (Form S-8 No. 333-39159) pertaining to the 1997 Executive Retirement Plan of Westinghouse Air Brake Technologies Corporation,

(3) Registration Statement (Form S-8 No. 333-02979) pertaining to the 1995 Non-Employee Directors' Fee and Stock Option Plan of Westinghouse Air Brake Technologies Corporation,

(4) Registration Statement (Form S-8 No. 333-115014) pertaining to the 2004 Bonus Plan Agreements of Westinghouse Air Brake Technologies Corporation,

(5) Registration Statement (Form S-8 No. 333-137985) pertaining to the 2000 Stock Incentive Plan of Westinghouse Air Brake Technologies Corporation,

(6) Registration Statement (Form S-8 No. 333-41840) pertaining to the 2000 Stock Inventive Plan of Westinghouse Air Brake Technologies Corporation,

(7) Registration Statement (Form S-8 No. 333-40468) pertaining to the 1995 Non-Employee Directors' Fee and Stock Option Plan of Westinghouse Air Brake Technologies Corporation,

(8) Registration Statement (Form S-8 No. 333-35744) pertaining to the 2000 Savings Plan of Westinghouse Air Brake Technologies Corporation,

(9) Registration Statement (Form S-8 No. 333-89086) pertaining to the 2002 Employee Stock Ownership Plan of Westinghouse Air Brake Technologies Corporation,

(10) Registration Statement (Form S-8 No. 333-179857) pertaining to the 2011 Stock Incentive Plan of Westinghouse Air Brake Technologies Corporation,

(11) Registration Statement (Form S-3 No. 333-219657) of Westinghouse Air Brake Technologies Corporation,

(12) Registration Statement (Form S-8 No. 219662) pertaining to the 1995 Non-Employee Directors' Fee and Stock Option Plan of Westinghouse Air Brake Technologies Corporation, and

(13) Registration Statement (Form S-8 No. 219663) pertaining to the 2011 Stock Incentive Plan of Westinghouse Air Brake Technologies Corporation;

of our reports dated February 26, 2018, with respect to the consolidated financial statements and schedule of Westinghouse Air Brake Technologies Corporation and the effectiveness of internal control over financial reporting of Westinghouse Air Brake Technologies Corporation included in this Annual Report (Form 10-K) of Westinghouse Air Brake Technologies Corporation for the year ended December 31, 2017.

/s/ ERNST & YOUNG LLP

Pittsburgh, Pennsylvania
February 26, 2018

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S‑8 (Nos. 333-53753, 333-39159, 333-02979, 333-115014, 333-137985, 333-41840, 333-40468, 333-35744, 333-89086, 333-179857, 333-219662, and 333-219663) and Form S-3 (No. 333-219657) of WESTINGHOUSE AIR BRAKE TECHNOLOGIES CORPORATION of our report dated February 23, 2017 relating to the financial statements of Faiveley Transport, which appears in this Annual Report on Form 10-K of Westinghouse Air Brake Technologies Corporation.

/s/ PricewaterhouseCoopers Audit

Neuilly-sur-Seine, France
February 26, 2018

Exhibit 31.1

CERTIFICATION

I, Raymond T. Betler, certify that:

1. I have reviewed this annual report on Form 10-K of Westinghouse Air Brake Technologies Corporation.

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

(d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2018

By:	/s/ Raymond T. Betler
Name:	**Raymond T. Betler**
Title:	**President and Chief Executive Officer**

Exhibit 31.2

CERTIFICATION

I, Patrick D. Dugan, certify that:

1. I have reviewed this annual report on Form 10-K of Westinghouse Air Brake Technologies Corporation.

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

(d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 26, 2018

By:	/S/ PATRICK D. DUGAN
Name:	**Patrick D. Dugan**
Title:	**Executive Vice President Finance and Chief Financial Officer**

Exhibit 32.1

CERTIFICATION

Pursuant to 18 U.S.C. § 1350, the undersigned officers of Westinghouse Air Brake Technologies Corporation (the "*Company*"), hereby certify, to the best of their knowledge, that the Company's Annual Report on Form 10-K for the year ended December 31, 2016 (the "*Report*") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ RAYMOND T. BETLER
Raymond T. Betler
President and Chief Executive Officer

Date: February 26, 2018

By: /s/ PATRICK D. DUGAN
Patrick D. Dugan
Executive Vice President Finance and Chief Financial Officer

Date: February 26, 2018