

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549  
FORM 10-K**

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
**For the fiscal year ended December 31, 2018**

or

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

Commission File No. 000-54799

**HYSTER-YALE MATERIALS HANDLING, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of incorporation or organization)

**31-1637659**

(I.R.S. Employer Identification No.)

**5875 Landerbrook Drive, Suite 300, Cleveland, Ohio**

(Address of principal executive offices)

**44124-4069**

(Zip Code)

Registrant's telephone number, including area code: **(440) 449-9600**

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

Title of each class

Name of each exchange on which registered

**Class A Common Stock, Par Value \$0.01 Per Share**

**New York Stock Exchange**

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

**Class B Common Stock, Par Value \$0.01 Per Share**

(Title of class)

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). **YES**  **NO**

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

**Large accelerated filer**  Accelerated filer  Non-accelerated filer  Smaller reporting company  Emerging growth company

(Do not check if a 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**

Aggregate market value of Class A Common Stock and Class B Common Stock held by non-affiliates as of June 30, 2018 (the last business day of the registrant's most recently completed second fiscal quarter): \$719,253,114

Number of shares of Class A Common Stock outstanding at February 22, 2019 : 12,688,937

Number of shares of Class B Common Stock outstanding at February 22, 2019 : 3,876,941

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Company's Proxy Statement for its 2019 annual meeting of stockholders are incorporated herein by reference in Part III of this Form 10-K.

**HYSTER-YALE MATERIALS HANDLING, INC.**  
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## PART I

### Item 1. BUSINESS

#### General

Hyster-Yale Materials Handling, Inc. ("Hyster-Yale" or the "Company") and its subsidiaries, including its operating company Hyster-Yale Group, Inc. ("HYG"), is a leading, globally integrated, full-line lift truck manufacturer. The Company offers a broad array of solutions aimed at meeting the specific materials handling needs of its customers, including attachments and hydrogen fuel cell power products, telematics, automation and fleet management services, as well as a variety of other power options for its lift trucks. The Company, headquartered in Cleveland, Ohio, through HYG, designs, engineers, manufactures, sells and services a comprehensive line of lift trucks, attachments and aftermarket parts marketed globally primarily under the Hyster<sup>®</sup> and Yale<sup>®</sup> brand names, mainly to independent Hyster<sup>®</sup> and Yale<sup>®</sup> retail dealerships. Lift trucks and component parts are manufactured in the United States, China, Northern Ireland, Mexico, the Netherlands, the Philippines, Italy, Vietnam, Japan and Brazil. Hyster-Yale was incorporated as a Delaware corporation in 1999.

The Company operates Bolzoni S.p.A. ("Bolzoni"). Bolzoni is a leading worldwide producer and distributor of attachments, forks and lift tables marketed under the Bolzoni<sup>®</sup>, Auramo<sup>®</sup> and Meyer<sup>®</sup> brand names. Bolzoni products are manufactured in Italy, China, Germany, Finland and the United States. Through the design, production and distribution of a wide range of attachments, Bolzoni has a strong presence in the market niche of lift-truck attachments and industrial material handling.

In 2018, the Company announced, as part of a plan to expand Bolzoni's capabilities in the United States, Bolzoni's North America attachment manufacturing will be moved into HYG's Sulligent, Alabama manufacturing facility over the course of 2019. As a result, effective January 1, 2019, the Sulligent facility became a Bolzoni facility. As of December 31, 2018, the Sulligent facility has been included in the lift truck operations within this Annual Report on Form 10-K. The Company will reclassify the historical results of the Sulligent facility for 2019 reporting beginning with the first quarter 2019 Form 10-Q.

The Company operates Nuvera Fuel Cells, LLC ("Nuvera"). Nuvera is an alternative-power technology company focused on hydrogen fuel cell stacks and engines.

On June 1, 2018, the Company completed the acquisition of the majority interest in Zhejiang Maximal Forklift Co., Ltd. ("Maximal"). Maximal is a Chinese manufacturer of utility and standard lift trucks and specialized material handling equipment involved in the design, manufacture, service and distribution of Class 1 electric and Class 5 internal combustion engine counterbalance utility and standard platforms, and Class 2 and Class 3 electric warehouse products for both the local China and global markets under the Maximal brand. Maximal also designs and produces specialized products in the port equipment and rough terrain forklift markets. The results of Maximal are included in the JAPIC segment since the date of acquisition.

The Company makes its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports available, free of charge, through its website, [www.hyster-yale.com](http://www.hyster-yale.com), as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC").

#### Manufacturing and Assembly

The Company manufactures components, such as frames, masts and transmissions, and assembles lift trucks in the market of sale whenever practical to minimize freight cost and balance currency mix. In some instances, however, it utilizes one worldwide location to manufacture specific components or assemble specific lift trucks. Additionally, components and assembled lift trucks are exported when it is advantageous to meet demand in certain markets. The Company operates thirteen lift truck manufacturing and assembly facilities worldwide with five plants in the Americas, three in EMEA and five in JAPIC, including joint venture operations. In addition, the Company operates seven Bolzoni manufacturing facilities worldwide.

Sales of lift trucks represented approximately 77% of the Company's annual revenues in 2018 (approximately 49% internal combustion engine units and approximately 28% electric units), and 77% in 2017 and 2016, respectively. Service, rental and other revenues were approximately 4% in 2018, 5% in 2017 and 6% in 2016. Bolzoni's revenues were approximately 5% in 2018 and 2017 and 4% in 2016. Nuvera's revenues were approximately 1% in 2018.

During 2018, the Company's retail shipments of lift trucks in North America by end market were approximately 22% to the food and beverage market, approximately 15% to the logistics market, approximately 13% to the natural resource and materials market, approximately 13% to the consumer and business trade market, approximately 13% to the manufacturing market, approximately 13% to the rental market and approximately 11% to the durable goods market.

## **Aftermarket Parts**

The Company offers a line of aftermarket parts to service its large installed base of lift trucks currently in use in the industry. The Company offers online technical reference databases specifying the required aftermarket parts to service lift trucks and an aftermarket parts ordering system. Aftermarket parts sales represented approximately 13% of the Company's annual revenues in each of 2018, 2017 and 2016.

The Company sells Hyster® - and Yale® -branded aftermarket parts to dealers for Hyster® and Yale® lift trucks. The Company also sells aftermarket parts under the UNISOURCE™ and PREMIER™ brands to Hyster® and Yale® dealers for the service of competitor lift trucks. The Company has a contractual relationship with a third-party, multi-brand, aftermarket parts wholesaler in the Americas and EMEA whereby orders from the Company's dealers for parts for lift trucks are fulfilled by the third party who then pays the Company a commission.

## **Marketing**

The Company's marketing organization is structured in three regional divisions by industry focus: the Americas; EMEA, which includes Europe, the Middle East and Africa; and JAPIC, which includes Japan, Asia, Pacific, India and China. In each region, certain marketing support functions for the Hyster® and Yale® brands are carried out by shared-services teams. These activities include sales and service training, information systems support, product launch coordination, specialized sales material development, help desks, order entry, marketing strategy and field service support.

## **Patents, Trademarks and Licenses**

The Company relies on a combination of trade secret protection, trademarks, copyrights, and patents to establish and protect the Company's proprietary rights. These intellectual property rights may not have commercial value or may not be sufficiently broad to protect the aspect of the Company's technology to which they relate or competitors may design around the patents. The Company is not materially dependent upon patents or patent protection; however, as materials handling equipment has become more technologically advanced, the Company and its competitors have increasingly sought patent protection for inventions incorporated into their respective products. The Company owns the Hyster®, Yale®, Maximal®, Bolzoni Auramo®, Meyer® and Nuvera® trademarks and believes these trademarks are material to its business.

## **Distribution Network**

The Company distributes lift trucks and attachments primarily through two channels: independent dealers and a National Accounts program. In addition, the Company distributes aftermarket parts and service for its lift trucks through its independent dealers. The Company's end-user base is diverse and fragmented, including, among others, light and heavy manufacturers, trucking and automotive companies, rental companies, building materials and paper suppliers, lumber, metal products, warehouses, retailers, food distributors, container handling companies and U.S. and non-U.S. governmental agencies.

### **Independent Dealers**

The Company's dealers, located in 129 countries, are generally independently owned and operated. As of December 31, 2018, Hyster® had 13 independent dealers and Yale® had 28 independent dealers in the Americas. Hyster® had 69 independent dealers and Yale® had 90 independent dealers in EMEA and Hyster® had 51 independent dealers and Yale® had 8 independent dealers in JAPIC. In addition, as of December 31, 2018, the Company had 30 dual-branded dealers in the Americas, five in EMEA and five in JAPIC. As of December 31, 2018, the Company had 109 Maximal® dealers primarily in JAPIC.

### **National Accounts**

The Company operates a National Accounts program for both Hyster® and Yale®. The National Accounts program focuses on large customers with centralized purchasing and geographically dispersed operations in multiple dealer territories. The National Accounts program accounted for 16%, 17% and 17% of new lift truck unit volume in 2018, 2017 and 2016, respectively. The independent dealers support the National Accounts program by providing aftermarket parts and service on a local basis. Dealers receive a commission for the support they provide in connection with National Accounts sales and for the preparation and delivery of lift trucks to customer locations. In addition to selling new lift trucks, the National Accounts program markets services, including full maintenance leases and fleet management.

### **Financing of Sales**

The Company is engaged in a joint venture with Wells Fargo Financial Leasing, Inc. ("WF") to provide dealer and customer financing of new lift trucks in the United States. The Company owns 20% of the joint venture entity, HYG Financial Services, Inc. ("HYGFS"), and receives fees and remarketing profits under a joint venture agreement. This agreement has an initial term

through December 2023 and automatically renews for additional one-year terms unless written notice is given by either party at least 180 days prior to termination. The Company accounts for its ownership of HYGFS using the equity method of accounting.

Under the joint venture agreement with HYGFS, the Company's dealers and certain customers are extended credit for the purchase of lift trucks to be placed in the dealer's floor plan inventory or the financing of lift trucks that are sold or leased to customers. For some of these arrangements, the Company provides recourse or repurchase obligations to HYGFS or to others. In substantially all of these transactions, a perfected security interest is maintained in the lift trucks financed, so that in the event of a default, the Company has the ability to take title to the assets financed and sell it through the Hyster<sup>®</sup> or Yale<sup>®</sup> dealer network. Furthermore, the Company has established reserves for exposures under these agreements when required. In addition, the Company has an agreement with WF to limit its exposure to losses at certain eligible dealers. Under this agreement, losses related to guarantees for these certain eligible dealers are limited to 7.5% of their original loan balance. See Notes 18 and 19 to the Consolidated Financial Statements in this Annual Report on Form 10-K for further discussion.

### Backlog

The following table outlines the Company's backlog of unfilled orders placed with its manufacturing and assembly operations for new lift trucks:

	December 31, 2018	September 30, 2018	December 31, 2017
Units (in thousands)	43.9	42.3	33.8
Backlog, approximate sales value (in millions)	\$ 1,190	\$ 1,090	\$ 860

As of December 31, 2018, the Company expects substantially all of its backlog of unfilled orders placed with its manufacturing and assembly operations for new lift trucks to be sold during fiscal 2019. Backlog represents unfilled lift truck orders placed with the Company's manufacturing and assembly facilities from dealers and National Account customers. In general, unfilled orders may be canceled at any time prior to the time of sale; however, the Company can assess cancellation penalties on dealer orders within a certain period prior to initiating production. The dollar value of backlog is calculated using the current unit backlog and the forecasted average sales price per unit.

### Key Suppliers and Raw Materials

At times, the Company has experienced significant increases in material costs, primarily as a result of global price increases in industrial metals, including steel, lead and copper and other commodity products, such as rubber, as a result of increased demand and limited supply. While the Company attempts to pass these increased costs along to its customers in the form of higher prices for its products, it may not be able to fully offset the increased costs of industrial metals and other commodities, due to overall market conditions and the lag time involved in implementing price increases for its products.

A significant raw material required by the Company's manufacturing operations is steel, which is generally purchased from steel producing companies in the geographic area near each of the Company's manufacturing facilities. Other significant components for the Company's lift trucks are engines, axles, brakes, transmissions, batteries and chargers. These components are available from numerous sources in quantities sufficient to meet the Company's requirements. The Company depends on a limited number of suppliers for some of the Company's crucial components, including diesel and gasoline engines, which are supplied by, among others, Power Solutions International, Inc., Kubota Corp., and Cummins Inc., drive-system components, which are supplied by, among others, Dana Corporation and ZF Company, and cast-iron counterweights used to counter balance some lift trucks, which are obtained from, among others, North Vernon Industry Corp. and Eagle Quest International Ltd. Some of these critical components are imported and subject to regulations, such as customary inspection by the U.S. Customs and Border Protection under the auspices of the U.S. Department of Homeland Security, as well as the Company's own internal controls and security procedures.

### Competition

The Company is one of the leaders in the lift truck industry with respect to market share in the Americas and worldwide. Competition in the materials handling industry is intense and is based primarily on strength and quality of distribution, brand loyalty, customer service, new lift truck sales prices, availability of products and aftermarket parts, comprehensive product line offerings, product performance, product quality and features and the cost of ownership over the life of the lift truck. The Company competes with several global lift truck manufacturers that operate in all major markets, as well as other niche companies. The lift truck industry also competes with alternative methods of materials handling, including conveyor systems and automated guided vehicles and systems. The Company's aftermarket parts offerings compete with parts manufactured by other lift truck manufacturers, as well as companies that focus solely on the sale of generic parts.

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The use of fuel-cell technology in industrial and commercial applications is a relatively new development. Companies implementing such technology face competitors that integrate more traditional energy technologies into their product lines, as well as competitors that have implemented or are implementing alternatives to traditional energy technologies, such as lithium batteries, fuel additives and other high efficiency or “renewable” technologies.

### **Cyclical Nature of Lift Truck Business**

The Company’s lift truck business historically has been cyclical. Fluctuations in the rate of orders for lift trucks, attachments and fuel-cell technology reflect the capital investment decisions of the Company’s customers, which depend to a certain extent on the general level of economic activity in the various industries the lift truck customers serve. During economic downturns, customers tend to delay new lift truck and parts purchases. Consequently, the Company has experienced, and in the future may continue to experience, significant fluctuations in its revenues and net income.

### **Research and Development**

The Company’s lift truck research and development capability is organized around four major engineering centers, all coordinated on a global basis by the Company’s global executive administrative center. Products are designed for each brand concurrently and generally each center is focused on the global requirements for a single product line. The Company’s counterbalanced development center, which has global design responsibility for several classes of lift trucks for a highly diverse customer base, is located in Fairview, Oregon. The Company’s big truck development center is located in Nijmegen, the Netherlands, adjacent to a dedicated global big truck assembly facility. Big trucks are primarily used in handling shipping containers and other specialized heavy lifting applications, including steel, concrete and energy-related industries. Warehouse trucks, which are primarily used in distribution applications, are designed based on regional differences in stacking and storage practices. The Company designs warehouse equipment for sale in the Americas market in Greenville, North Carolina, adjacent to the Americas manufacturing and assembly facility. The Company designs warehouse equipment for the European market in Masate, Italy adjacent to its manufacturing and assembly facility for warehouse equipment. The Company also has an engineering Concept Center in the United Kingdom to support advanced design activities and an engineering office in India to support its global design activities for its four major engineering centers.

The Company’s lift truck engineering centers utilize a three-dimensional CAD/CAM system and are interconnected, with each of the Company’s manufacturing and assembly facilities and certain suppliers. This allows for collaboration in technical engineering designs and collaboration with these suppliers. Additionally, the Company solicits customer feedback throughout the design phase to improve product development efforts.

Development and innovation of attachments occurs in each of the Bolzoni manufacturing plants for the specific products produced in that location.

Nuvera has two research and development locations. In the U.S., Billerica, Massachusetts is the primary location for design, development and testing of fuel-cell stacks and engines. In Europe, the operations at San Donato, Italy are primarily focused on fuel-cell systems integration and testing.

### **Sumitomo-NACCO Joint Venture**

The Company has a 50% ownership interest in Sumitomo NACCO Forklift Co., Ltd. (“SN”), a limited liability company that was formed in 1970 primarily to manufacture and distribute Sumitomo-branded lift trucks in Japan and export Hyster<sup>®</sup> - and Yale<sup>®</sup> -branded lift trucks and related components and service parts outside of Japan. Sumitomo Heavy Industries, Ltd. owns the remaining 50% interest in SN. Each stockholder of SN is entitled to appoint directors representing 50% of the vote of SN’s board of directors. All matters related to policies and programs of operation, manufacturing and sales activities require mutual agreement between the Company and Sumitomo Heavy Industries, Ltd. prior to a vote of SN’s board of directors. As a result, the Company accounts for its ownership in SN using the equity method of accounting. The Company purchases Hyster<sup>®</sup> - and Yale<sup>®</sup> -branded lift trucks and related component and aftermarket parts from SN for sale outside of Japan under agreed-upon terms. The Company also contracts with SN for engineering design services on a cost plus basis and charges SN for technology used by SN but developed by the Company. During 2018, SN sold approximately 7,100 lift trucks.

### **Employees**

As of January 31, 2019, the Company had approximately 7,800 employees. Certain employees in the Danville, Illinois parts depot operations are unionized. The Company’s contract with the Danville union expires in June 2021. Employees at the facilities in Berea, Kentucky; Sulligent, Alabama; and Greenville, North Carolina are not represented by unions. In Brazil, all employees are represented by a union. The Company’s contracts with the Brazilian unions expire annually at which time

salaries and certain benefits are negotiated for the following year. In Mexico, certain employees are unionized. The Company's contract with the Mexico union expires annually in March, at which time salaries are negotiated for the following year. Benefits in Mexico are negotiated every other year.

In Europe, certain employees in the Helsinki, Finland; Salzgitter, Germany; Craigavon, Northern Ireland; Masate, Italy; Piacenza, Italy; San Donato, Italy; and Nijmegen, the Netherlands facilities are unionized. All of the European employees are part of works councils or employee forums, which perform a consultative role on business and employment matters.

The Company believes its current labor relations with both union and non-union employees are generally satisfactory. However, there can be no assurances that the Company will be able to successfully renegotiate its union contracts without work stoppages or on acceptable terms. A prolonged work stoppage at a unionized facility could have a material adverse effect on the Company's business and results of operations.

### **Environmental Matters**

The Company's manufacturing operations are subject to laws and regulations relating to the protection of the environment, including those governing the management and disposal of hazardous substances. The Company's policies stress compliance, and the Company believes it is currently in substantial compliance with existing environmental laws. If the Company fails to comply with these laws or its environmental permits, it could incur substantial costs, including cleanup costs, fines and civil and criminal sanctions. In addition, future changes to environmental laws could require the Company to incur significant additional expense or restrict operations. Based on current information, the Company does not expect compliance with environmental requirements to have a material adverse effect on the Company's financial condition or results of operations.

The Company's products may also be subject to laws and regulations relating to the protection of the environment, including those governing vehicle exhaust. Regulatory agencies in the United States and Europe have issued or proposed various regulations and directives designed to reduce emissions from spark-ignited engines and diesel engines used in off-road vehicles, such as industrial lift trucks. These regulations require the Company and other lift truck manufacturers to incur costs to modify designs and manufacturing processes and to perform additional testing and reporting. While there can be no assurance, the Company believes the impact of the additional expenditures to comply with these requirements will not have a material adverse effect on its business.

The Company is investigating or remediating historical contamination at some current and former sites caused by its operations or those of businesses it acquired. While the Company is not currently aware that any material outstanding claims or obligations exist with regard to these sites, the discovery of additional contamination at these or other sites could result in significant cleanup costs that could have a material adverse effect on the Company's financial conditions and results of operations.

In connection with any acquisition made by the Company, the Company could, under some circumstances, be held financially liable for or suffer other adverse effects due to environmental violations or contamination caused by prior owners of businesses the Company has acquired. In addition, under some of the agreements through which the Company has sold businesses or assets, the Company has retained responsibility for certain contingent environmental liabilities arising from pre-closing operations. These liabilities may not arise, if at all, until years later and could require the Company to incur significant additional expenses.

### **Government and Trade Regulations**

In the past, the Company's business has been affected by trade disputes between the United States and Europe. In addition, the Company has been impacted by ongoing trade disputes with China which has led to the imposition of tariffs resulting in higher material costs. In the future, to the extent the Company is affected by trade disputes with other foreign jurisdictions, and increased tariffs are levied on its goods or the materials the Company purchases, its results of operations may be materially adversely affected.

### **Item 1A. RISK FACTORS**

***The lift truck business is cyclical. Any downturn in the general economy could result in significant decreases in the Company's revenue and profitability and an inability to sustain or grow the business.***

The Company's lift truck business historically has been cyclical. Fluctuations in the rate of orders for lift trucks, attachments and fuel-cell technology reflect the capital investment decisions of the Company's customers, which depend to a certain extent on the general level of economic activity in the various industries the lift truck customers serve. During economic downturns, customers tend to delay new lift truck and parts purchases. Consequently, the Company has experienced, and in the future may continue to experience, significant fluctuations in revenues and net income. If there is a downturn in the general economy, or in



the industries served by lift truck customers, the Company's revenue and profitability could decrease significantly, and the Company may not be able to sustain or grow the business.

***The Company is subject to risks relating to its global operations.***

The Company is a U.S.-based multinational corporation that has global operations. Operating globally subjects the Company to changes in government regulations and policies in a large number of jurisdictions around the world, including those related to tariffs and trade barriers, investments, property ownership rights, taxation, and exchange controls. Changes in the relative values of currencies occur from time to time and could affect the Company's operating results.

Further, existing free trade laws and regulations provide certain beneficial duties and tariffs for qualifying imports and exports, subject to compliance with the applicable classification and other requirements. Changes in laws or policies governing the terms of international trade, and in particular increased trade restrictions, tariffs or taxes on imports from countries where the Company manufactures products could have a material adverse impact on the Company's business and financial results.

Part of the strategy to expand worldwide market share is strengthening the Company's non-U.S. distribution network. A part of this strategy also includes decreasing costs by sourcing basic components in lower-cost countries. Implementation of this part of the strategy may increase the impact of the risks to global operations and there can be no assurance that such risks will not have an adverse effect on the Company's revenues, profitability or market share.

Economic and political conditions in the United States and abroad may lead to significant changes in tax rules and regulations. For example, Brexit and proposals to reform non-U.S. tax laws or other regulations could significantly impact how multinational corporations do business. Although the Company cannot predict the final form of any regulation, if adopted at all, such regulations could, if enacted, have a material adverse impact on the Company's profitability.

***The Company depends on a limited number of suppliers for specific critical components.***

The Company depends on a limited number of suppliers for some of its critical components, including diesel, gasoline and alternative fuel engines and cast-iron counterweights used to counterbalance some lift trucks. Some of these critical components are imported and subject to regulation, primarily with respect to customary inspection of such products by the U.S. Customs and Border Protection under the auspices of the U.S. Department of Homeland Security. The results of operations could be adversely affected if the Company is unable to obtain these critical components, or if the costs of these critical components were to increase significantly, due to regulatory compliance or otherwise, and the Company was unable to pass the cost increases on to its customers.

***The cost of raw materials used by the Company's products has fluctuated and may continue to fluctuate, which could materially reduce the Company's profitability.***

At times, the Company has experienced significant increases in materials costs, primarily as a result of global increases in industrial metals, including steel, lead and copper and other commodity prices, such as rubber, as a result of increased demand and limited supply. The Company manufactures products that include raw materials that consist of steel, rubber, copper, lead, castings and counterweights. The Company also purchases parts provided by suppliers that are manufactured from castings and steel or contain lead. The cost of these parts is affected by the same economic conditions that impact the cost of the parts the Company manufactures. The cost to manufacture lift trucks and related service parts has been and will continue to be affected by fluctuations in prices for these raw materials. If costs of these raw materials increase, the Company's profitability could be materially reduced.

***The pricing and costs of the Company's products have been and may continue to be impacted by currency fluctuations, which could materially increase costs, and result in material exchange losses and reduce operating margins.***

Because the Company conducts transactions in various currencies, including euros, U.S. dollars, Japanese yen, British pounds, Swedish kroner, Mexican peso, Brazilian real and Chinese renminbi, lift truck pricing is subject to the effects of fluctuations in the value of these currencies and fluctuations in the related currency exchange rates. As a result, the Company's sales have historically been affected by, and may continue to be affected by, these fluctuations. In addition, exchange rate movements between currencies in which the Company purchases materials and components and manufactures certain products and the currencies in which the Company sells those products have been affected by and may continue to result in exchange losses that could materially reduce operating margins. Furthermore, the Company's hedging contracts may not fully offset risks from changes in currency exchange rates.

***The Company relies primarily on its network of independent dealers to sell lift trucks and aftermarket parts and the Company has no direct control over sales by those dealers to customers. Ineffective or poor performance by these independent dealers could result in a significant decrease in revenues and profitability and the inability to sustain or grow the business.***



The Company relies primarily on independent dealers for sales of lift trucks and aftermarket parts. Sales of the Company's products are therefore subject to the quality and effectiveness of the dealers, who are not subject to the Company's direct control. As a result, ineffective or poorly performing dealers could result in a significant decrease in revenues and profitability and the Company may not be able to sustain or grow its business.

***If the Company's strategic initiatives, including the introduction of new products, do not prove effective, revenues, profitability and market share could be significantly reduced.***

Changes in the timing of implementation of the Company's current strategic initiatives may result in a delay in the expected recognition of future costs and realization of future benefits. In addition, if future industry demand levels are lower than expected, the actual annual cost savings could be lower than expected. If the Company is unable to successfully implement these strategic initiatives, revenues, profitability and market share could be significantly reduced.

***The Company may not be successful in commercializing Nuvera's technology, which success would depend, in part, on the Company's ability to protect Nuvera's intellectual property.***

The Company may not be able to commercialize Nuvera's fuel-cell technologies on economically efficient terms. Unforeseen difficulties, such as delays in development due to design defects or changes in specifications and insufficient research and development resources or cost overruns, may hinder the Company's ability to incorporate Nuvera's technologies into its product lines on an economically favorable basis or at all.

Furthermore, Nuvera's commercial success will depend largely on the Company's ability to maintain patent and other intellectual property protection covering certain of Nuvera's technologies. Nuvera's fuel-cell technology may not be economically viable if the Company is unable to prevent others from infringing or successfully challenging the validity of certain patents and other intellectual property rights attributable to Nuvera.

***Failure to compete effectively within the Company's industry could result in a significant decrease in revenues and profitability.***

The Company experiences intense competition in the sale of lift trucks and aftermarket parts. Competition in the lift truck industry is based primarily on strength and quality of dealers, brand loyalty, customer service, new lift truck sales prices, availability of products and aftermarket parts, comprehensive product line offerings, product performance, product quality and features and the cost of ownership over the life of the lift truck. The Company competes with several global manufacturers that operate in all major markets. These manufacturers may have lower manufacturing costs and greater financial resources than the Company, which may enable them to commit larger amounts of capital in response to changing market conditions. If the Company fails to compete effectively, revenues and profitability could be significantly reduced.

***If the global capital goods market declines, the cost saving efforts the Company has implemented may not be sufficient to achieve the benefits expected.***

If the global economy or the capital goods market declines, revenues could decline. If revenues are lower than expected, the programs the Company has implemented may not achieve the benefits expected. Furthermore, the Company may be forced to take additional cost saving steps that could result in additional charges that materially adversely affect the ability to compete or implement the Company's current business strategies.

***The Company is subject to import and export controls, which could subject the Company to liability or impair the Company's ability to compete in international markets.***

Due to the international scope of the Company's operations, the Company is subject to a complex system of import- and export-related laws and regulations, including U.S. export control and customs regulations and customs regulations of other countries. These regulations are complex and vary among the legal jurisdictions in which the Company operates. Obtaining the necessary authorizations, including any required license, for a particular transaction may be time-consuming, is not guaranteed, and may result in the delay or loss of sales opportunities. Furthermore, U.S. export control laws and economic sanctions laws prohibit certain transactions with U.S. embargoed or sanctioned countries, governments, persons and entities. Any alleged or actual failure to comply with such laws and regulations may subject the Company to government scrutiny, investigation, and civil and criminal penalties, and may limit the Company's ability to import or export products or to provide services outside the United States. Depending on severity, any of these penalties could have a material impact on the Company's business, financial condition and results of operations. There can be no assurance that laws and regulations will not be changed in ways which will require the Company to modify its business models and objectives or affect the Company's returns on investments by restricting existing activities and products, subjecting them to escalating costs or prohibiting them outright.

***The Company is subject to recourse or repurchase obligations with respect to the financing arrangements of some of its customers.***

Through arrangements with WF and others, dealers and other customers are provided financing for new lift trucks in the United States and in major countries of the world outside of the United States. Through these arrangements, the Company's dealers and certain customers are extended credit for the purchase of lift trucks to be placed in the dealer's floor plan inventory or the financing of lift trucks that are sold or leased to customers. For some of these arrangements, the Company provides recourse or repurchase obligations such that it would become obligated in the event of default by the dealer or customer. Total amounts subject to these types of obligations were \$192.7 million and \$203.5 million at December 31, 2018 and 2017, respectively. Generally, the Company maintains a perfected security interest in the assets financed such that, in the event that the Company becomes obligated under the terms of the recourse or repurchase obligations, it may take title to the assets financed. The Company cannot be certain, however, that the security interest will equal or exceed the amount of the recourse or repurchase obligations. In addition, the Company cannot be certain that losses under the terms of the recourse or repurchase obligations will not exceed the reserves that have been set aside in the consolidated financial statements. The Company could incur a charge to earnings if reserves prove to be inadequate, which could have a material adverse effect on results of operations and liquidity for the period in which the charge is taken.

***Actual liabilities relating to pending lawsuits may exceed the Company's expectations.***

The Company is a defendant in pending lawsuits involving, among other things, product liability claims. The Company cannot be sure that it will succeed in defending these claims, that judgments will not be rendered against the Company with respect to any or all of these proceedings or that reserves set aside or insurance policies will be adequate to cover any such judgments. The Company could incur a charge to earnings if reserves prove to be inadequate or the average cost per claim or the number of claims exceed estimates, which could have a material adverse effect on results of operations and liquidity for the period in which the charge is taken and any judgment or settlement amount is paid.

***Other products may be introduced to the market by competitors, making the Nuvera technology less marketable.***

The use of fuel-cell technology in industrial and commercial applications is a relatively new development. Companies implementing such technology face competition from competitors that integrate more traditional energy technologies into their product lines, as well as competitors that have implemented or are implementing alternatives to traditional energy technologies, such as lithium-ion batteries, fuel additives and other high efficiency or "renewable" technologies. Any of these technologies may have more established or otherwise more attractive manufacturing, distribution and operating cost features, which could negatively impact customers' preferences for product lines that incorporate fuel-cell technology and, as a result, diminish the marketability of products incorporating Nuvera technology.

***Actual liabilities relating to environmental matters may exceed the Company's expectations.***

The Company's manufacturing operations are subject to laws and regulations relating to the protection of the environment, including those governing the management and disposal of hazardous substances. If the Company fails to comply with these laws or the Company's environmental permits, then the Company could incur substantial costs, including cleanup costs, fines and civil and criminal sanctions. In addition, future changes to environmental laws could require the Company to incur significant additional expenses or restrict operations.

The Company's products may also be subject to laws and regulations relating to the protection of the environment, including those governing vehicle exhausts. Regulatory agencies in the United States and Europe have issued or proposed various regulations and directives designed to reduce emissions from spark-ignited engines and diesel engines used in off-road vehicles, such as industrial lift trucks. These regulations require the Company and other lift truck manufacturers to incur costs to modify designs and manufacturing processes and to perform additional testing and reporting.

The Company is investigating or remediating historical contamination at some current and former sites caused by its operations or those of businesses it acquired. While the Company is not currently aware that any material outstanding claims or obligations exist with regard to these sites, the discovery of additional contamination at these or other sites could result in significant cleanup costs that could have a material adverse effect on its financial condition and results of operations.

In connection with any acquisition the Company has made, it could, under some circumstances, be held financially liable for or suffer other adverse effects due to environmental violations or contamination caused by prior owners of businesses the Company acquired. In addition, under some of the agreements through which the Company has sold businesses or assets, it has retained responsibility for certain contingent environmental liabilities arising from pre-closing operations. These liabilities may not arise, if at all, until years later and could require the Company to incur significant additional expenses, which could materially adversely affect the results of operations and financial condition.

***The Company may be unable to protect its information technology infrastructure against service interruptions, data corruption, cyber-based attacks or network breaches, which could disrupt business operations or result in a loss of data confidentiality.***

The Company relies on information technology networks and systems, including the Internet, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities, including supply chain, manufacturing, distributing, invoicing and collection. The Company uses information technology systems to record, process and summarize financial information and results of operations for internal reporting purposes and to comply with regulatory financial reporting, legal and tax requirements. These technological networks and systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components; power outages; hardware failures; or computer viruses or other types of cyber attacks. In addition, security breaches could result in unauthorized disclosure of confidential information. If these information technology systems suffer severe damage, disruption, breach, or shutdown, and business continuity plans do not effectively resolve the issues in a timely manner, there could be a negative impact on operating results or the Company may suffer financial or reputational damage.

***The Company may become subject to claims under non-U.S. laws and regulations, which may require expensive, time-consuming and distracting litigation.***

Because the Company has employees, property and business operations outside of the United States, it is subject to the laws and the court systems of many jurisdictions. The Company may become subject to claims outside the United States based in non-U.S. jurisdictions for violations of their laws with respect to the Company's non-U.S. operations. In addition, these laws may be changed or new laws may be enacted in the future. Non-U.S. litigation is often expensive, time consuming and distracting. As a result, any of these risks could significantly reduce profitability and the Company's ability to operate its businesses effectively.

***The Company may be subject to risks relating to increasing cash requirements of certain employee benefit plans which may affect its financial position.***

The expenses recorded for, and cash contributions required to be made to, the Company's defined benefit pension plans are dependent on changes in market interest rates and the value of plan assets, which are dependent on actual investment returns. Significant changes in market interest rates, decreases in the value of plan assets or investment losses on plan assets may require the Company to increase the cash contributed to defined benefit plans which may affect its financial position.

***The Company is dependent on key personnel, and the loss of these key personnel could significantly reduce profitability.***

The Company is highly dependent on the skills, experience and services of key personnel, and the loss of key personnel could have a material adverse effect on its business, operating results and financial condition. Employment and retention of qualified personnel is important to the successful conduct of the Company's business. Therefore, the Company's success also depends upon its ability to recruit, hire, train and retain additional skilled and experienced management personnel. The Company's inability to hire and retain personnel with the requisite skills could impair its ability to manage and operate its business effectively and could significantly reduce profitability.

***Certain members of the Company's extended founding family own a substantial amount of its Class A and Class B common stock and, if they were to act in concert, could control the outcome of director elections and other stockholder votes on significant corporate actions.***

The Company has two classes of common stock: Class A common stock and Class B common stock. Holders of Class A common stock are entitled to cast one vote per share and, as of December 31, 2018, accounted for approximately 25 percent of the voting power of the Company. Holders of Class B common stock are entitled to cast ten votes per share and, as of December 31, 2018, accounted for the remaining voting power of the Company. As of December 31, 2018, certain members of the Company's extended founding family held approximately 30 percent of the Company's outstanding Class A common stock and approximately 85 percent of the Company's outstanding Class B common stock. On the basis of this common stock ownership, certain members of the Company's extended founding family could have exercised 71 percent of the Company's total voting power. Although there is no voting agreement among such extended family members, in writing or otherwise, if they were to act in concert, they could control the outcome of director elections and other stockholder votes on significant corporate actions, such as certain amendments to the Company's certificate of incorporation and sales of the Company or substantially all of its assets. Because certain members of the Company's extended founding family could prevent other stockholders from exercising significant influence over significant corporate actions, the Company may be a less attractive takeover target, which could adversely affect the market price of its common stock.

**Item 1B. UNRESOLVED STAFF COMMENTS**

None.

**Item 2. PROPERTIES**

The following table presents the principal assembly, manufacturing, distribution and office facilities that the Company owns or leases:

Segment	Facility Location	Owned/Leased	Function(s)
<b>Lift Truck</b>			
<b>Americas</b>	Berea, Kentucky	Owned	Assembly of lift trucks and manufacture of component parts
	Charlotte, North Carolina	Leased	Customer experience and training center
	Cleveland, Ohio	Leased	Global headquarters
	Danville, Illinois	Owned	Americas parts distribution center
	Fairview, Oregon	Owned	Counterbalanced development center for design and testing of lift trucks, prototype equipment and component parts
	Greenville, North Carolina	Owned	Divisional headquarters and marketing and sales operations for Hyster <sup>®</sup> and Yale <sup>®</sup> in the Americas; Americas warehouse development center; assembly of lift trucks and manufacture of component parts
	Itu, Brazil	Owned	Assembly of lift trucks and parts distribution center
	Ramos Arizpe, Mexico	Owned	Manufacture of component parts for lift trucks
	Sulligent, Alabama	Owned	Manufacture of component parts for lift trucks
	<b>EMEA</b>	Craigavon, Northern Ireland	Owned
Frimley, Surrey, United Kingdom		Leased	Divisional headquarters and marketing and sales operations for Hyster <sup>®</sup> and Yale <sup>®</sup> in EMEA
Irvine, Scotland		Leased	European administrative center
Masate, Italy		Leased	Assembly of lift trucks; European warehouse development center
Nijmegen, The Netherlands		Owned	Big trucks development center; manufacture and assembly of big trucks and component parts; European parts distribution center
<b>JAPIC</b>	Fuyang, China	Owned	Manufacture and assembly of lift trucks
	Pune, India	Leased	Engineering design services
	Shanghai, China	Owned	Assembly of lift trucks, sale of parts and marketing operations of China
	Sydney, Australia	Leased	Divisional headquarters and sales and marketing for JAPIC; JAPIC parts distribution center
<b>Bolzoni</b>	Helsinki, Finland	Leased	Manufacture and distribution of Bolzoni products
	Heibei, China	Owned	Manufacture and distribution of Bolzoni products
	Homewood, Illinois	Owned	Manufacture and distribution of Bolzoni products
	Piacenza, Italy	Owned	Bolzoni headquarters; manufacture and distribution of Bolzoni products
	Salzgitter, Germany	Owned	Manufacture and distribution of Bolzoni products
	Wuxi, China	Owned	Manufacture and distribution of Bolzoni products
<b>Nuvera</b>	Billerica, Massachusetts	Leased	Nuvera research and development laboratory

SN's operations are supported by three facilities. SN's headquarters are located in Obu, Japan at a facility owned by SN. The Obu facility also has assembly and distribution capabilities for lift trucks and parts. In Cavite, the Philippines and Hanoi, Vietnam, SN owns facilities for the manufacture of components for SN and the Company's products.

**Item 3. LEGAL PROCEEDINGS**

The Company is, and will likely continue to be, involved in a number of legal proceedings which the Company believes generally arise in the ordinary course of the business, given its size, history and the nature of its business and products. The Company is not a party to any material legal proceeding.

**Item 4. MINE SAFETY DISCLOSURES**

None.

**Item 4A. EXECUTIVE OFFICERS OF THE REGISTRANT**

The following tables set forth the name, age, current position and principal occupation and employment during the past five years of the Company's executive officers.

<b>Name</b>	<b>Age</b>	<b>Current Position</b>	<b>Other Positions</b>
Alfred M. Rankin, Jr.	77	Chairman, President and Chief Executive Officer of Hyster-Yale (from prior to 2014), Chairman of HYG (from prior to 2014).	
Colin Wilson	64	President and Chief Executive Officer, HYG of Hyster-Yale (from September 2014), President and Chief Executive Officer of HYG (from September 2014).	President and Chief Operating Officer of HYG (from prior to 2014), President, Americas of HYG (from prior to 2014 to September 2014).
Gregory J. Breier	53	Vice President, Tax of Hyster-Yale (from May 2014), Vice President, Tax of HYG (from prior to 2014).	
Brian K. Frentzko	58	Vice President, Treasurer of Hyster-Yale (from prior to 2014), Vice President, Treasurer of HYG (from prior to 2014).	
Jennifer M. Langer	45	Vice President, Controller of Hyster-Yale (from prior to 2014), Vice President, Controller of HYG (from prior to 2014).	
David M. LeBlanc	54	Vice President, Strategy, Planning and Business Development of HYG (from August 2018).	Group President, International Engineered Support Structures, Valmont Industries, Inc. (an industrial company) (from April 2015 to February 2018), President, Chemical Analysis Division, Thermo Fisher Scientific Inc. (a medical company) (from prior to 2014 to October 2014).
Lauren E. Miller	64	Senior Vice President, Chief Marketing Officer of Hyster-Yale (from January 2015), Senior Vice President, Chief Marketing Officer of HYG (from January 2015).	Senior Vice President, Marketing and Consulting of Hyster-Yale (from prior to 2014 to January 2015), Senior Vice President, Marketing and Consulting of HYG (from prior to 2014 to January 2015).
Charles F. Pascarelli	59	Senior Vice President, President, Americas of HYG (from January 2015)	President, Sales and Marketing, Americas of HYG (from prior to 2014 to January 2015).
Rajiv K. Prasad	55	Chief Product and Operations Officer of HYG (from February 2018).	Senior Vice President, Global Product Development, Manufacturing and Supply Chain Strategy of HYG (from September 2014 to February 2018). Vice President, Global Product Development and Manufacturing of HYG (from prior to 2014 to September 2014).
Anthony J. Salgado	48	Senior Vice President, JAPIC of HYG (from January 2016).	Vice President, Corporate Officer, UniCarriers Corporation (an industrial company) (from April 2014 to January 2016), President, UniCarriers Americas Corporation (from prior to 2014 to January 2016).
Harry Sands	67	Senior Vice President, Managing Director, Europe, Middle East and Africa of HYG (from June 2015).	Vice President, Manufacturing EMEA of HYG (from prior to 2014 to June 2015).
Kenneth C. Schilling	59	Senior Vice President and Chief Financial Officer of Hyster-Yale (from September 2014), Senior Vice President and Chief Financial Officer of HYG (from September 2014).	Vice President and Chief Financial Officer of Hyster-Yale (from prior to 2014 to September 2014), Vice President and Chief Financial Officer of HYG (from prior to 2014 to September 2014).
Gopichand Somayajula	62	Vice President, Global Product Development of HYG (from prior to 2014)	
Suzanne S. Taylor	56	Senior Vice President, General Counsel and Secretary of Hyster-Yale (from May 2016), Senior Vice President, General Counsel and Secretary of HYG (from May 2016).	Vice President, Deputy General Counsel and Assistant Secretary of Hyster-Yale (from prior to 2014 to May 2016), Vice President, Deputy General Counsel and Assistant Secretary of HYG (from prior to 2014 to May 2016).
Mark H. Trivett	49	Vice President Finance, Europe, Middle East and Africa of HYG (from prior to 2014).	
Raymond C. Ulmer	55	Vice President Finance, Americas of HYG (from prior to 2014).	

The information under this Item is furnished pursuant to Instruction 3 to Item 401(b) of Regulation S-K. There exists no arrangement or understanding between any executive officer and any other person pursuant to which such executive officer was elected. Each executive officer serves until his or her successor is elected and qualified.

**PART II**

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

The Company's Class A common stock is traded on the New York Stock Exchange under the ticker symbol "HY." There is no established public trading market for the Company's Class B common stock, and no alternative trading or quotation system for the Company's Class B common stock has been or is expected to be established. The Class B common stock is convertible into Class A common stock on a one-for-one basis.

At December 31, 2018, there were approximately 848 Class A common stockholders of record and approximately 875 Class B common stockholders of record.

**Purchases of Equity Securities by the Issuer and Affiliated Purchasers**

There have been no issuer purchases of equity securities and no publicly announced repurchase program currently exists.

**Item 6. SELECTED FINANCIAL DATA**

	Year Ended December 31				
	2018	2017 <sup>(1)</sup>	2016	2015	2014
	(In millions, except per share and employee data)				
<b>Operating Statement Data:</b>					
Revenues	\$ 3,174.4	\$ 2,885.2	\$ 2,569.7	\$ 2,578.1	\$ 2,767.2
Operating profit	\$ 38.8	\$ 74.1	\$ 32.9	\$ 103.5	\$ 148.8
Net income	\$ 34.3	\$ 48.9	\$ 42.3	\$ 75.1	\$ 110.2
Net (income) loss attributable to noncontrolling interest	0.4	(0.3)	0.5	(0.4)	(0.4)
Net income attributable to stockholders	\$ 34.7	\$ 48.6	\$ 42.8	\$ 74.7	\$ 109.8
Basic earnings per share attributable to stockholders	\$ 2.10	\$ 2.95	\$ 2.61	\$ 4.58	\$ 6.61
Diluted earnings per share attributable to stockholders	\$ 2.09	\$ 2.94	\$ 2.61	\$ 4.57	\$ 6.58
<b>Balance Sheet Data at December 31:</b>					
Total assets	\$ 1,742.1	\$ 1,647.9	\$ 1,287.1	\$ 1,095.9	\$ 1,120.8
Long-term debt	\$ 210.1	\$ 216.2	\$ 82.2	\$ 19.6	\$ 12.0
Stockholders' equity	\$ 527.4	\$ 565.5	\$ 463.8	\$ 460.8	\$ 454.5
<b>Cash Flow Data:</b>					
Provided by (used for) operating activities	\$ 67.6	\$ 164.7	\$ (48.9)	\$ 89.4	\$ 100.0
Used for investing activities	\$ (110.9)	\$ (47.3)	\$ (145.1)	\$ (31.3)	\$ (44.4)
Provided by (used for) financing activities	\$ (87.6)	\$ 53.1	\$ 77.9	\$ (7.1)	\$ (110.5)
<b>Other Data:</b>					
Per share data:					
Cash dividends	\$ 1.2325	\$ 1.2025	\$ 1.1700	\$ 1.1300	\$ 1.0750
Market value at December 31	\$ 61.96	\$ 85.16	\$ 63.77	\$ 52.45	\$ 73.20
Stockholders' equity at December 31	\$ 31.85	\$ 34.35	\$ 28.30	\$ 28.23	\$ 27.98
Actual shares outstanding at December 31	16,561	16,462	16,391	16,324	16,241
Basic weighted average shares outstanding	16,540	16,447	16,376	16,307	16,607
Diluted weighted average shares outstanding	16,602	16,514	16,427	16,355	16,675
Total employees at December 31 <sup>(2)</sup>	7,700	6,800	6,500	5,400	5,400

(1) During 2017, the Company recognized \$19.8 million of equity income from HYGFS and \$38.2 million of income tax expense as a result of the Tax Cuts and Jobs Act (the "Tax Reform Act"), which was signed into law on December 22, 2017. Further information on the impacts of the Tax Reform Act is discussed in Note 7 to the consolidated financial statements.

(2) Excludes temporary employees.

**Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS  
HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share, Percentage Data and as Otherwise Noted)*

**OVERVIEW**

Hyster-Yale Materials Handling, Inc. ("Hyster-Yale" or the "Company") and its subsidiaries, including its operating company Hyster-Yale Group, Inc. ("HYG"), is a leading, globally integrated, full-line lift truck manufacturer. The Company offers a broad array of solutions aimed at meeting the specific materials handling needs of its customers, including attachments and hydrogen fuel cell power products, telematics, automation and fleet management services, as well as a variety of other power options for its lift trucks. The Company, through HYG, designs, engineers, manufactures, sells and services a comprehensive line of lift trucks, attachments and aftermarket parts marketed globally primarily under the Hyster<sup>®</sup> and Yale<sup>®</sup> brand names, mainly to independent Hyster<sup>®</sup> and Yale<sup>®</sup> retail dealerships. The materials handling business historically has been cyclical because the rate of orders for lift trucks fluctuates depending on the general level of economic activity in the various industries and countries its customers serve. Lift trucks and component parts are manufactured in the United States, China, Northern Ireland, Mexico, the Netherlands, the Philippines, Italy, Vietnam, Japan and Brazil.

The Company operates Bolzoni S.p.A. ("Bolzoni"). Bolzoni is a leading worldwide producer and distributor of attachments, forks and lift tables marketed under the Bolzoni Auramo<sup>®</sup> and Meyer<sup>®</sup> brand names. Bolzoni products are manufactured in Italy, China, Germany, Finland and the United States. Through the design, production and distribution of a wide range of attachments, Bolzoni has a strong presence in the market niche of lift-truck attachments and industrial material handling.

In 2018, the Company announced, as part of a plan to expand Bolzoni's capabilities in the United States, Bolzoni's North America attachment manufacturing will be moved into HYG's Sulligent, Alabama manufacturing facility over the course of 2019. As a result, effective January 1, 2019, the Sulligent facility became a Bolzoni facility. As of December 31, 2018, the Sulligent facility has been included in the lift truck operations within this Annual Report on Form 10-K. The Company will reclassify the historical results of the Sulligent facility for 2019 reporting beginning with the first quarter 2019 Form 10-Q.

The Company operates Nuvera Fuel Cells, LLC ("Nuvera"). Nuvera is an alternative-power technology company focused on hydrogen fuel cell stacks and engines.

On June 1, 2018, the Company completed the acquisition of the majority interest in Zhejiang Maximal Forklift Co., Ltd. ("Maximal"). Maximal is a Chinese manufacturer of utility and standard lift trucks and specialized material handling equipment involved in the design, manufacture, service and distribution of Class 1 electric and Class 5 internal combustion engine counterbalance utility and standard platforms, and Class 2 and Class 3 electric warehouse products for both the local China and global markets under the Maximal brand. Maximal also designs and produces specialized products in the port equipment and rough terrain forklift markets. The results of Maximal are included in the JAPIC segment since the date of acquisition.

Competition in the materials handling industry is intense and is based primarily on strength and quality of distribution, brand loyalty, customer service, new lift truck sales prices, availability of products and aftermarket parts, comprehensive product line offerings, product performance, product quality and features and the cost of ownership over the life of the lift truck. The Company competes with several global lift truck manufacturers that operate in all major markets, as well as other niche companies. The lift truck industry also competes with alternative methods of materials handling, including conveyor systems and automated guided vehicle systems. The Company's aftermarket parts offerings compete with parts manufactured by other lift truck manufacturers, as well as companies that focus solely on the sale of generic parts.

The Company's mission is to be a leading, globally integrated designer, manufacturer and marketer of a complete range of lift-truck solutions by leveraging its high-quality, application-tailored lift trucks, attachments and power solutions to offer the lowest cost of ownership and the best overall value. The Company's core competency is lift truck manufacturing, but its goal is to become the lift truck solutions partner to the materials handling market, one customer and one industry at a time.

The Company's objective is to provide a wide-range of solutions to its customers to generate profitable growth through increasing volumes, which in turn are expected to generate market share gains and drive improved margins. The Company plans to accomplish these objectives by implementing its core strategic initiatives to: provide the lowest cost of ownership, while enhancing productivity for customers; be the leader in the delivery of industry- and customer-focused solutions; be the leader in independent distribution; grow in emerging markets; be the leader in the attachments business and be a leader in fuel cells and their applications.



**Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS  
HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share, Percentage Data and as Otherwise Noted)*

**Critical Accounting Policies and Estimates**

The discussion and analysis of financial condition and results of operations are based upon the Company's consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires the use of estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures of contingent assets and liabilities, if any. On an ongoing basis, the Company evaluates its estimates based on historical experience, actuarial valuations and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates.

The Company believes the following critical accounting policies affect the more significant judgments and estimates used in the preparation of the consolidated financial statements.

*Revenue recognition* : Revenue is recognized when obligations under the terms of a contract with the customer are satisfied which occurs when control of the trucks, parts, or services are transferred to the customer. Revenue is measured as the amount of consideration expected to be received in exchange for transferring goods or providing services. The satisfaction of performance obligations under the terms of a revenue contract generally gives rise for the right to payment from the customer. The Company's standard payment terms vary by the type and location of the customer and the products or services offered. Generally, the time between when revenue is recognized and when payment is due is not significant. Given the insignificant days between revenue recognition and receipt of payment, financing components do not exist between the Company and its customers. Taxes collected from customers are excluded from revenue. The estimated costs of product warranties are recognized as expense when the products are sold. See Note 16 for further information on product warranties.

The majority of the Company's sales contracts contain performance obligations satisfied at a point in time when title and risks and rewards of ownership have transferred to the customer. Revenue for service contracts are recognized as the services are provided.

For contracts with customers that include multiple performance obligations, judgment is required to determine whether performance obligations specified in these contracts are distinct and should be accounted for as separate revenue transactions for recognition purposes. For such arrangements, revenue is allocated to each performance obligation based on its relative standalone selling price. Standalone selling prices are generally determined based on the prices charged to customers or using expected cost plus margin. Impairment losses recognized on receivables or contract assets were not significant for the year ended December 31, 2018 .

The Company generally expenses sales commissions when incurred because the amortization period would have been one year or less. These costs are reported on the line "Selling, general and administrative expenses" in the Consolidated Statements of Operations.

The Company pays for shipping and handling activities regardless of when control is transferred and has elected to account for shipping and handling as activities to fulfill the promise to transfer the good, rather than a promised service. These costs are reported on the line "Cost of sales" in the Consolidated Statements of Operations.

*Product warranties* : The Company provides for the estimated cost of product warranties at the time revenues are recognized. While the Company engages in extensive product quality programs and processes, including actively monitoring and evaluating the quality of component suppliers, the warranty obligation is affected by product failure rates, labor costs and replacement component costs incurred in correcting a product failure. If actual product failure rates, labor costs or replacement component costs differ from the Company's estimates, which are based on historical failure rates and consideration of known trends, revisions to the estimate of the cost to correct product failures would be required. If the estimate of the cost to correct product failures were to increase by one percent over 2018 levels, the reserves for product warranties would increase and additional expense of \$4.6 million would be incurred. The Company's past results of operations have not been materially affected by a change in the estimate of product warranties and although there can be no assurances, the Company is not aware of any circumstances that would be reasonably likely to materially change the estimates in the future.

*Retirement benefit plans* : The Company maintains various defined benefit pension plans that provide benefits based on years of service and average compensation during certain periods. Pension benefits are frozen for all employees other than certain

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employees in the Netherlands. All other eligible employees, including employees whose pension benefits are frozen, receive retirement benefits under defined contribution retirement plans. The Company's policy is to periodically make contributions to fund the defined benefit pension plans within the range allowed by applicable regulations. The defined benefit pension plan assets consist primarily of publicly traded stocks and government and corporate bonds. There is no guarantee the actual return on the plans' assets will equal the expected long-term rate of return on plan assets or that the plans will not incur investment losses.

The expected long-term rate of return on defined benefit plan assets reflects management's expectations of long-term rates of return on funds invested to provide for benefits included in the projected benefit obligations. In establishing the expected long-term rate of return assumption for plan assets, the Company considers the historical rates of return over a period of time that is consistent with the long-term nature of the underlying obligations of these plans as well as a forward-looking rate of return. The historical and forward-looking rates of return for each of the asset classes used to determine the Company's estimated rate of return assumption were based upon the rates of return earned or expected to be earned by investments in the equivalent benchmark market indices for each of the asset classes.

Expected returns for most of the Company's pension plans are based on a calculated market-related value of assets. Under this methodology, asset gains and losses resulting from actual returns that differ from expected returns are recognized in the market-related value of assets ratably over three years.

The basis for the selection of the discount rate for each plan is determined by matching the timing of the payment of the expected obligations under the defined benefit plans against the corresponding yield of high-quality corporate bonds of equivalent maturities.

The following illustrates the sensitivity of the net periodic benefit cost and projected benefit obligation to a 1% change in the discount rate or return on plan assets (in millions):

Assumption	Change	Increase (decrease) 2019 net pension expense	Increase (decrease) 2018 projected benefit obligation
Discount rate	1% increase	\$(0.2)	\$(27.1)
	1% decrease	—	31.4
Return on plan assets	1% increase	(2.1)	N/A
	1% decrease	2.1	N/A

A change in life expectancy by one year would result in a \$4.5 million change in the 2018 projected benefit obligation.

See Note 10 to the consolidated financial statements in this Annual Report on Form 10-K for further discussion of the retirement benefit plans.

*Long-lived assets, goodwill and intangible assets:* Net property, plant and equipment, goodwill and net intangible assets at December 31, 2018 were \$296.2 million, \$108.3 million and \$67.7 million, respectively. The Company makes estimates and assumptions in preparing the consolidated financial statements for which actual results will emerge over long periods of time. This includes the recoverability of long-lived assets employed in the business, including assets of acquired businesses. These estimates and assumptions are closely monitored and periodically adjusted as circumstances warrant. For instance, expected asset lives may be shortened or an impairment recorded based on a change in the expected use of the asset or performance of the related asset group.

The Company periodically evaluates long-lived assets, including intangible assets with finite lives, for impairment when changes in circumstances or the occurrence of certain events indicate the carrying amount of an asset may not be recoverable. Upon identification of indicators of impairment, assets and liabilities are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets or liabilities. The asset group would be considered impaired when the estimated future undiscounted cash flows generated by the asset group are less than carrying value. If the carrying value of an asset group is considered impaired, an impairment charge is recorded for the amount that the carrying value of the asset group exceeds its fair value. Fair value is estimated as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The determination of asset groups and the underlying cash flows requires the use of significant judgment.

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The Company has intangible assets, including customer and contractual relationships, patents and technology, and trademarks. Intangible assets with a definite life are amortized over a period ranging from one to twenty years on a systematic and rational basis (generally straight line) that is representative of the asset's use. Costs related to internally developed intangible assets, such as patents, are expensed as incurred and included in selling, general and administrative expenses.

Intangible assets with an indefinite life, including certain trademarks, are not amortized. Indefinite-lived intangible assets are tested for impairment annually, and are tested for impairment between annual tests if an event occurs or circumstances change that would indicate that the carrying amount may be impaired. An impairment loss generally would be recognized when the fair value is less than the carrying value of the indefinite-lived intangible asset.

Of the \$67.7 million of net intangible assets, \$17.2 million relates to indefinite-lived trademarks, related to the acquisition of Bolzoni. The primary valuation technique used in estimating the fair value of indefinite-lived intangible assets is the present value of discounted cash flows. Specifically, a relief of royalty rate is applied to estimated sales, with the resulting amounts discounted using an appropriate discount rate of a market participant. The relief of royalty rate is the estimated royalty rate a market participant would pay to acquire the right to market and produce the product. If the resulting discounted cash flows are less than book value of the indefinite-lived intangible asset, an impairment exists and the asset would be adjusted to fair value. Based on impairment testing as of May 1, 2018, no impairment was identified.

Goodwill is tested for impairment annually as of May 1 and is tested for impairment between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. The Company completed the annual testing of impairment of goodwill as of May 1, 2018 at the reporting unit level for the related goodwill. The Company uses either a qualitative or quantitative analysis to determine whether fair value exceeds carrying value. An estimate of the fair value of the reporting unit is determined through a combination of comparable market values for similar businesses and discounted cash flows. These estimates can change significantly based on such factors as the reporting unit's financial performance, economic conditions, interest rates, growth rates, pricing, changes in business strategies and competition. Based on this testing, the fair value of each reporting unit was in excess of its carrying value and no impairment exists.

Factors which could result in future impairment charges include, but are not limited to, changes in worldwide economic conditions, changes in competitive conditions and customer preferences. These risk factors are discussed in Item 1A, "Risk Factors," of this Form 10-K. In addition, changes in the weighted average cost of capital could also impact impairment testing results. The Company will continue to monitor its reporting units and asset groups for any indicators of impairment.

*Product liabilities* : The Company provides for the estimated cost of personal and property damage relating to its products based on a review of historical experience and consideration of any known trends. Reserves are recorded for estimates of the costs for known claims and estimates of the costs of incidents that have occurred but for which a claim has not yet been reported, up to the stop-loss insurance coverage. While the Company engages in extensive product quality reviews and customer education programs, the product liability provision is affected by the number and magnitude of claims of alleged product-related injury and property damage and the cost to defend those claims. In addition, the estimates regarding the magnitude of claims are affected by changes in assumptions regarding medical costs, inflation rates and trends in damages awarded by juries. Changes in the assumptions regarding any one of these factors could result in a change in the estimate of the magnitude of claims. A one percent increase in the estimate of the number of claims or the magnitude of claims would increase the product liability reserve and reduce operating profit by approximately \$0.1 million to \$0.3 million. Although there can be no assurances, the Company is not aware of any circumstances that would be reasonably likely to materially change the estimates in the future.

*Self-insurance liabilities* : The Company is generally self-insured for product liability, environmental liability and medical and workers' compensation claims. For product liability, catastrophic insurance coverage is retained for potentially significant individual claims. The Company also has insurance for certain historic product liability claims. An estimated provision for claims reported and for claims incurred but not yet reported under the self-insurance programs is recorded and revised periodically based on industry trends, historical experience and management judgment. In addition, industry trends are considered within management's judgment for valuing claims. Changes in assumptions for such matters as legal judgments and settlements, legal defense costs, inflation rates, medical costs and actual experience could cause estimates to change in the near term. Changes in any of these factors could materially change the estimates for these self-insurance obligations causing a related increase or decrease in reported net operating results in the period of change in the estimate.

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**CONSOLIDATED FINANCIAL REVIEW**

The following table identifies the components of change for 2018 compared with 2017 by segment:

	Revenues	Gross Profit	Operating Profit	Net Income Attributable to Stockholders
2017	\$ 2,885.2	\$ 502.6	\$ 74.1	\$ 48.6
Increase (decrease) in 2018				
Americas	153.4	(20.3)	(34.2)	(14.9)
EMEA	53.0	7.1	(0.2)	1.0
JAPIC	68.2	1.9	(8.4)	(1.2)
Lift truck business	274.6	(11.3)	(42.8)	(15.1)
Bolzoni	23.7	8.9	3.1	1.9
Nuvera	8.6	(3.8)	3.7	(1.2)
Eliminations	(17.7)	0.7	0.7	0.5
<b>2018</b>	<b>\$ 3,174.4</b>	<b>\$ 497.1</b>	<b>\$ 38.8</b>	<b>\$ 34.7</b>

**FINANCIAL REVIEW**

The segment and geographic results of operations for the Company were as follows for the year ended December 31 :

				Favorable / (Unfavorable) % Change	
	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
<b>Lift truck unit shipments (in thousands)</b>					
Americas	61.1	58.4	54.4	4.6 %	7.4 %
EMEA	30.0	28.9	24.6	3.8 %	17.5 %
JAPIC <sup>(1)</sup>	10.8	6.1	5.8	77.0 %	5.2 %
	101.9	93.4	84.8	9.1 %	10.1 %
<b>Revenues</b>					
Americas	\$ 1,987.5	\$ 1,834.1	\$ 1,675.7	8.4 %	9.5 %
EMEA	768.8	715.8	615.7	7.4 %	16.3 %
JAPIC <sup>(1)</sup>	242.1	173.9	169.5	39.2 %	2.6 %
Lift truck business	2,998.4	2,723.8	2,460.9	10.1 %	10.7 %
Bolzoni <sup>(2)</sup>	200.9	177.2	115.6	13.4 %	n.m.
Nuvera	12.3	3.7	2.5	n.m.	n.m.
Eliminations	(37.2)	(19.5)	(9.3)	n.m.	n.m.
	\$ 3,174.4	\$ 2,885.2	\$ 2,569.7	10.0 %	12.3 %
<b>Gross profit (loss)</b>					
Americas	\$ 314.3	\$ 334.6	\$ 287.9	(6.1)%	16.2 %
EMEA	102.8	95.7	89.5	7.4 %	6.9 %
JAPIC <sup>(1)</sup>	22.1	20.2	17.1	9.4 %	18.1 %
Lift truck business	439.2	450.5	394.5	(2.5)%	14.2 %
Bolzoni <sup>(2)</sup>	63.7	54.8	35.7	16.2 %	53.5 %
Nuvera	(5.9)	(2.1)	(2.7)	181.0 %	(22.2)%
Eliminations	0.1	(0.6)	—	n.m.	n.m.
	\$ 497.1	\$ 502.6	\$ 427.5	(1.1)%	17.6 %

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	2018	2017	2016	Favorable / (Unfavorable) % Change	
				2018 vs. 2017	2017 vs. 2016
<b>Selling, general and administrative expenses</b>					
Americas	\$ 238.9	\$ 225.0	\$ 214.0	(6.2)%	(5.1)%
EMEA	96.2	88.9	84.1	(8.2)%	(5.7)%
JAPIC <sup>(1)</sup>	36.6	26.3	23.8	(39.2)%	(10.5)%
Lift truck business	371.7	340.2	321.9	(9.3)%	(5.7)%
Bolzoni <sup>(2)</sup>	54.2	48.4	35.8	(12.0)%	n.m.
Nuvera	32.4	39.9	36.9	18.8 %	(8.1)%
	\$ 458.3	\$ 428.5	\$ 394.6	(7.0)%	(8.6)%
<b>Operating profit (loss)</b>					
Americas	\$ 75.4	\$ 109.6	\$ 73.9	(31.2)%	48.3 %
EMEA	6.6	6.8	5.4	(2.9)%	25.9 %
JAPIC <sup>(1)</sup>	(14.5)	(6.1)	(6.7)	(137.7)%	9.0 %
Lift truck business	67.5	110.3	72.6	(38.8)%	51.9 %
Bolzoni <sup>(2)</sup>	9.5	6.4	(0.1)	(48.4)%	n.m.
Nuvera	(38.3)	(42.0)	(39.6)	8.8 %	(6.1)%
Eliminations	0.1	(0.6)	—	n.m.	n.m.
	\$ 38.8	\$ 74.1	\$ 32.9	(47.6)%	125.2 %
<b>Interest expense</b>	\$ 16.0	\$ 14.6	\$ 6.7	(9.6)%	(117.9)%
<b>Other income</b>	\$ (13.8)	\$ (34.3)	\$ (12.1)	(59.8)%	183.5 %
<b>Income before income taxes</b>	\$ 36.6	\$ 93.8	\$ 38.3	(61.0)%	144.9 %
<b>Net income (loss) attributable to stockholders</b>					
Americas	\$ 53.5	\$ 68.4	\$ 59.6	(21.8)%	14.8 %
EMEA	6.3	5.3	9.4	18.9 %	(43.6)%
JAPIC <sup>(1)</sup>	(3.1)	(1.9)	(2.1)	(63.2)%	9.5 %
Lift truck business	56.7	71.8	66.9	(21.0)%	7.3 %
Bolzoni <sup>(2)</sup>	5.8	3.9	(0.3)	(48.7)%	n.m.
Nuvera	(27.9)	(26.7)	(23.8)	(4.5)%	(12.2)%
Eliminations	0.1	(0.4)	—	n.m.	n.m.
	\$ 34.7	\$ 48.6	\$ 42.8	(28.6)%	13.6 %
<b>Diluted earnings per share</b>	\$ 2.09	\$ 2.94	\$ 2.61	(28.9)%	12.6 %
<b>Reported income tax rate</b>	6.3%	47.9%	n.m.		

<sup>(1)</sup> Maximal was acquired on June 1, 2018 and results of operations have been included since the acquisition date.

<sup>(2)</sup> Bolzoni was acquired on April 1, 2016 and results of operations have been included since the acquisition date.

n.m. - not meaningful

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Following is the detail of the Company's unit shipments, bookings and backlog of unfilled orders placed with its manufacturing and assembly operations for new lift trucks, reflected in thousands of units. As of December 31, 2018, substantially all of the Company's backlog is expected to be sold within the next twelve months.

	<u>YEAR ENDED</u> <u>December 31, 2018</u>	<u>NINE MONTHS ENDED</u> <u>September 30, 2018</u>	<u>YEAR ENDED</u> <u>December 31, 2017</u>
Unit backlog, beginning of period	33.8	33.8	30.7
Unit shipments	(101.9)	(74.3)	(93.4)
Unit bookings	112.0	82.8	96.5
Unit backlog, end of period	<u>43.9</u>	<u>42.3</u>	<u>33.8</u>

The following is the detail of the approximate sales value of the Company's lift truck unit bookings and backlog, reflected in millions of dollars. The dollar value of bookings and backlog is calculated using the current unit bookings and backlog and the forecasted average sales price per unit.

	<u>YEAR ENDED</u> <u>December 31, 2018</u>	<u>NINE MONTHS ENDED</u> <u>September 30, 2018</u>	<u>YEAR ENDED</u> <u>December 31, 2017</u>
Bookings, approximate sales value	\$ 2,600	\$ 1,900	\$ 2,260
Backlog, approximate sales value	\$ 1,190	\$ 1,090	\$ 860

**2018 Compared with 2017**

The following table identifies the components of change in revenues for 2018 compared with 2017 :

	Revenues
2017	\$ 2,885.2
Increase in 2018 from:	
Unit volume and product mix	94.6
Maximal revenues	48.9
Parts	36.2
Unit price	35.4
Foreign currency	29.5
Bolzoni revenues	23.7
Other	12.3
Nuvera revenues	8.6
<b>2018</b>	<b>\$ 3,174.4</b>

Revenues increased 10.0% to \$3,174.4 million in 2018 from \$2,885.2 million in 2017. The increase was mainly due to higher unit and parts volume, favorable currency movements and improved pricing to offset material cost increases in the lift truck business. In addition, the acquisition of Maximal and increased Bolzoni revenues also contributed to the improvement in revenues.

Revenues in the Americas increased primarily as a result of increased unit shipments. Revenues increased primarily from higher sales of Class 4 and Class 5 internal combustion engine lift trucks, including the XT/MX standard truck and Big Trucks. In addition, increased parts volume and improved pricing to offset material cost increases also contributed to the increase in America's revenues.

EMEA's revenues increased mainly as a result of favorable currency movements of \$36.6 million from the translation of sales into U.S. dollars and increased parts volume and improved pricing to offset material cost increases.

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Revenues in JAPIC increased primarily as a result of the acquisition of Maximal, higher unit and parts volume, and favorable currency movements of \$1.9 million from the translation of sales into U.S. dollars.

Bolzoni's revenues increased mainly as a result of higher volume in the EMEA market and favorable foreign currency movements of \$10.2 million.

During the fourth quarter of 2018, Nuvera recognized revenue which had previously been deferred related to battery box replacement ("BBR") units due to the inability to estimate total future warranty costs. The BBRs are new technology and the design of the product continues to evolve. The Company determined sufficient data was available in the fourth quarter of 2018 to reasonably estimate the future costs related to the sale of BBR units, including warranty costs, which were also recorded during the fourth quarter of 2018.

The following table identifies the components of change in operating profit for 2018 compared with 2017 :

	Operating Profit
2017	\$ 74.1
Increase (decrease) in 2018 from:	
Lift truck selling, general and administrative expenses	(31.5)
Lift truck gross profit	(10.6)
Nuvera operations	3.7
Bolzoni operations	3.1
<b>2018</b>	<b>\$ 38.8</b>

The Company recognized operating profit of \$38.8 million in 2018 compared with \$74.1 million in 2017. The decrease in operating profit was mainly due to an increase in lift truck selling, general and administrative expenses primarily related to employee-related costs for sales and development of new products and the acquisition of Maximal in 2018. Lift truck gross profit decreased mainly as a result of higher material and manufacturing costs, partially offset by improved pricing and higher unit and parts shipments in 2018.

Operating profit in the Americas decreased primarily as a result of lower gross profit and higher selling, general and administrative expenses. The decrease in gross profit was mainly due to material and freight cost inflation and tariffs, net of price increases. The Americas implemented price increases during the first half of the year to offset higher than planned material cost inflation and aluminum and steel tariffs. However, operating results continue to reflect the lag of a \$25.7 million shortfall in 2018 between fully realizing those price increases and when the tariffs and material cost increases were first realized. Selling, general and administrative expenses increased mainly from higher employee-related costs for sales and development of new products, as well as higher acquisition-related expenses.

EMEA's operating profit was flat due to higher gross profit from favorable currency movements of \$12.3 million and improved pricing, which was partially offset by higher material and manufacturing cost inflation. The increase in gross profit was offset by higher selling, general and administrative expenses, including \$2.6 million of unfavorable foreign currency movements and higher sales costs to support the Company's strategic initiatives.

The operating loss in JAPIC increased mainly as a result of increased selling, general and administrative expenses primarily from expenses incurred at Maximal since the date of acquisition and higher sales costs to support the Company's strategic initiatives.

Bolzoni's operating profit improved primarily due to higher gross profit, partially offset by higher selling, general and administrative expenses.

Nuvera's operating loss decreased in 2018 from 2017 primarily due to higher product development funding from third-party customers and the absence of the 2017 impairment charge of \$4.9 million on Nuvera's long-lived assets. This was partially offset by higher development and production start-up expenses for its third-party development agreements.



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The Company recognized net income attributable to stockholders of \$34.7 million in 2018 compared with \$48.6 million in 2017. The decrease was primarily the result of lower operating profit, the effect of the favorable HYGFS equity income in 2017 related to the Tax Cuts and Jobs Act (the "Tax Reform Act") and unfavorable mark-to-market adjustments on an equity investment in a third-party. This decrease was partially offset by changes in discrete tax adjustments in the 2018 compared with 2017. See "Financial Review - Income Taxes" and Note 7 to the consolidated financial statements in this Annual Report on Form 10-K for further discussion of income taxes.

**2017 Compared with 2016**

The following table identifies the components of change in revenues for 2017 compared with 2016:

	Revenues	
2016	\$	2,569.7
Increase (decrease) in 2017 from:		
Unit volume and product mix		206.5
Bolzoni revenues		
First quarter 2017	\$	41.6
Increase in comparable periods	20.0	61.6
Parts		25.7
Unit price		23.1
Foreign currency		12.4
Nuvera revenues		1.2
Other		(15.0)
<b>2017</b>	<b>\$</b>	<b>2,885.2</b>

Revenues increased 12.3% to \$2,885.2 million in 2017 from \$2,569.7 million in 2016. The increase was mainly attributable to higher unit and parts volumes and a decrease in deal-specific pricing in the lift truck business in 2017 compared with 2016.

Revenues in the Americas increased in 2017 from 2016 primarily as a result of increased unit shipments of higher-priced trucks. Revenues increased primarily from sales of the Company's new Class 5 internal combustion engine standard truck and increased sales of higher-capacity, 3.5 to 8 ton, Class 5 trucks, as well as Class 1 and Class 2 electric trucks. In addition, a decrease in deal-specific pricing and an increase in parts sales also contributed to the increase in revenues in 2017 compared with 2016.

EMEA's revenues improved in 2017 from 2016 mainly as a result of increased unit shipments primarily related to shipments of the new Class 5 internal combustion engine standard truck and an increase in shipments of Class 1 electric-rider trucks.

The following table identifies the components of change in operating profit for 2017 compared with 2016 :

	Operating Profit	
2016	\$	32.9
Increase (decrease) in 2017 from:		
Lift truck gross profit		55.4
Bolzoni operations		6.5
Nuvera operations		(2.4)
Lift truck selling, general and administrative expenses		(18.3)
<b>2017</b>	<b>\$</b>	<b>74.1</b>

The Company recognized operating profit of \$74.1 million in 2017 compared with \$32.9 million in 2016. The increase in operating profit was primarily due to higher lift truck gross profit, partially offset by an increase in selling, general and

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administrative expenses. The increase in the lift truck gross profit was primarily due to higher unit shipments and related production efficiencies as well as improved pricing, net of material cost inflation.

Operating profit in the Americas increased in 2017 compared with 2016 primarily as a result of improved gross profit mainly due to higher unit shipments of higher-priced lift trucks and related production efficiencies, as well as improved pricing, net of material cost inflation. In addition, selling, general and administrative expenses in the Americas increased in 2017 compared with the 2016 primarily due to higher employee-related costs and increased costs for development and marketing of new products, partially offset by lower acquisition-related costs.

Operating profit in EMEA increased in 2017 compared with 2016 as a result of improved gross profit partially offset by higher selling, general and administrative expenses mainly from higher marketing and employee-related costs. Gross profit improved primarily from higher unit shipments and the favorable impact of foreign currency movements of \$4.4 million. The improvement was partially offset by material cost inflation.

Bolzoni's operating profit improved in 2017 from 2016 primarily due to the absence of \$2.7 million of one-time purchase accounting adjustments recorded in 2016 and higher gross profit from higher sales in the comparable second, third and fourth quarters of 2017 compared with 2016. Operating profit in the first quarter of 2017 was \$2.3 million.

During 2017, Nuvera's operating loss increased \$2.4 million compared with 2016, mainly due to an impairment charge of \$4.9 million recorded in 2017 on Nuvera's long-lived assets. Increased employee-related costs, professional fees and other general operating expenses also contributed to the increase in operating loss. These items were partially offset by lower product development and production start-up expenses. See Note 12 and Note 13 to the consolidated financial statements in this Annual Report on Form 10-K for further discussion of the impairment charge.

The Company recognized net income attributable to stockholders of \$48.6 million in 2017 compared with \$42.8 million in 2016. The increase was primarily the result of the increase in lift truck operating profit and \$19.8 million of favorable HYGFS equity income in 2017 related to the Tax Reform Act, which is reflected in "Income from Unconsolidated Affiliates" in the Consolidated Statement of Operations. These items were partially offset by income tax expense of \$38.2 million in 2017 due to the Tax Reform Act. See "Financial Review - Income Taxes" and Note 7 to the consolidated financial statements in this Annual Report on Form 10-K for further discussion of income taxes.

***Income taxes***

The income tax provision includes U.S. federal, state and local, and non-U.S. income taxes. In determining the effective income tax rate, the Company analyzes various factors, including annual earnings, the laws of taxing jurisdictions in which the earnings were generated, the impact of state and local income taxes, the ability to use tax credits, net operating loss and capital loss carryforwards, and available tax planning alternatives. Discrete items, including the effect of changes in tax laws, tax rates, and certain items with respect to valuation allowances or other unusual or non-recurring tax adjustments are reflected in the interim period in which they occur.

Deferred tax assets and liabilities are recognized based on the future tax consequences attributable to temporary differences that exist between the financial statement carrying value of assets and liabilities and their respective tax bases, and operating loss and tax credit carryforwards on a taxing jurisdiction basis. The Company measures deferred tax assets and liabilities using enacted tax rates that will apply in the years in which it expects the temporary differences to be recovered or paid.

The authoritative guidance for income taxes requires a reduction of the carrying amounts of deferred tax assets by recording a valuation allowance if, based on the available evidence, it is more likely than not (defined as a likelihood of more than 50%) such assets will not be realized. The valuation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in the Company's financial statements or tax returns and future profitability. The Company's accounting for deferred tax consequences represents its best estimate of those future events. Changes in the Company's estimates, due to unanticipated events or otherwise, could have a material effect on its financial condition and results of operations. The Company continually evaluates its deferred tax assets to determine if a valuation allowance is required.

On December 22, 2017, the President of the United States signed into law the Tax Reform Act. The Tax Reform Act significantly revised the U.S. corporate income tax regime by, among other things, lowering the U.S. corporate income tax rate

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from 35% to 21% effective January 1, 2018, repealing the deduction for domestic production activities, allowing the immediate expensing of certain qualified capital expenditures, implementing a territorial tax system and imposing a one-time transition tax on certain unremitted earnings of non-U.S. subsidiaries. As a result of the Tax Reform Act in 2017, the Company recorded provisional tax effects of \$38.2 million, comprised of \$33.1 million of tax expense due to the transition tax on the unremitted earnings and profits of non-U.S. subsidiaries and \$5.1 million of tax expense due to the effects on the Company's deferred tax assets and liabilities as of December 31, 2017. The Company has since finalized its calculation of earnings and profits, including the amounts held in cash or other specified assets and its calculation of available foreign tax credits consistent with the additional regulatory guidance issued during 2018 resulting in a reduction in tax expense of \$4.4 million which was recorded during 2018.

After the utilization of existing tax credits, the Company will pay cash taxes, including state income taxes, of \$17.6 million with respect to the transition tax payable over an installment period of eight years. As a result of the Tax Reform Act, no additional income taxes or withholding taxes have been provided for any undistributed foreign earnings, nor any additional outside basis differences inherent in these entities, as these amounts continue to be indefinitely reinvested in non-U.S. operations.

A reconciliation of the consolidated federal statutory and reported income tax is as follows for the years ended December 31:

	2018	2017	2016
Income before income taxes	\$ 36.6	\$ 93.8	\$ 38.3
Statutory taxes at 21% (35% in 2017 and 2016)	\$ 7.7	\$ 32.8	\$ 13.4
Permanent adjustments:			
Federal income tax credits	(2.9)	(1.6)	(1.7)
Non-U.S. rate differences	(2.3)	(7.8)	(9.0)
Equity interest earnings	(1.7)	(8.1)	(2.2)
State income taxes	0.6	1.1	0.1
Valuation allowance	3.0	3.4	2.4
Global intangible low-taxed income	1.2	—	—
Other	1.0	(0.2)	0.6
	\$ (1.1)	\$ (13.2)	\$ (9.8)
Discrete items:			
Tax Reform Act	(4.4)	38.2	—
Provision to return adjustments	(0.6)	0.6	(1.9)
Valuation allowance	—	(3.3)	(2.6)
Sale of non-U.S. investment	—	(9.1)	(1.9)
Other	0.7	(1.1)	(1.2)
	\$ (4.3)	\$ 25.3	\$ (7.6)
Income tax provision (benefit)	\$ 2.3	\$ 44.9	\$ (4.0)
Reported income tax rate	6.3%	47.9%	n.m.
n.m. - not meaningful			

The Company's effective income tax rate differs from the U.S. federal statutory tax rate primarily as a result of federal research and energy credits, income taxed in non-U.S. jurisdictions, equity interest earnings and changes in valuation allowances primarily in non-U.S. jurisdictions.

In addition, the Company recognized the effect of the Tax Reform Act as discrete adjustments. The effect of other discrete items on the reported income tax rate was as follows:

During 2017, the Company recognized a tax benefit of \$9.1 million and a tax expense of \$1.4 million for unrecognized tax benefits from an internal sale of a subsidiary between consolidated companies resulting in the repatriation of non-U.S.

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accumulated earnings taxed at higher rates. In addition, the Company settled various federal obligations in Brazil through the utilization of its federal net operating loss carryforwards for which a valuation allowance was previously provided. As a result of the utilization of the underlying deferred tax assets, the Company released the associated valuation allowance previously provided of \$4.7 million. This was partly offset by a \$1.6 million valuation allowance provided against deferred tax assets in China where the Company has determined that such deferred tax assets no longer meet the more likely than not standard for realization.

During 2016, the Company received a notice from the Italian Tax Authority approving the transfer of certain tax losses as part of an internal restructuring. As a result, the Company determined it is more likely than not that the deferred tax asset for such losses would be realized in the foreseeable future and released the valuation allowance previously provided. The Company also recognized tax benefits from provision to return adjustments primarily related to a U.S. tax deduction for manufacturing activities and adjustments for the taxation of certain foreign earnings and a tax benefit from an internal sale of a subsidiary between affiliated companies resulting in the repatriation of non-U.S. accumulated earnings which triggered a currency loss for U.S. tax purposes.

Other items during 2016 include a tax benefit of \$4.0 million. As a result of the Bolzoni acquisition, the Company changed its previous reinvestment assertion; and consequently, all of the earnings of its European operations are now considered permanently reinvested and the previously provided deferred tax liability is no longer required. In addition, the Company recognized tax expense of \$1.6 million related to non-deductible acquisition expenses and tax expense of \$2.1 million in net additions for unrecognized tax benefits.

See Note 7 to the consolidated financial statements in this Annual Report on Form 10-K for further discussion of income taxes.

**LIQUIDITY AND CAPITAL RESOURCES**

**Cash Flows**

The following tables detail the change in cash flow for the years ended December 31 :

	2018	2017	Change
<b>Operating activities:</b>			
Net income	\$ 34.3	\$ 48.9	\$ (14.6)
Depreciation and amortization	44.0	42.8	1.2
Stock-based compensation	5.7	8.8	(3.1)
Impairment of long-lived assets	—	4.9	(4.9)
Dividends from unconsolidated affiliates	22.2	2.8	19.4
Other	(2.4)	0.7	(3.1)
Working capital changes, excluding the effect of business acquisitions	(36.2)	55.8	(92.0)
<b>Net cash provided by operating activities</b>	<b>67.6</b>	<b>164.7</b>	<b>(97.1)</b>
<b>Investing activities:</b>			
Expenditures for property, plant and equipment	(38.8)	(41.0)	2.2
Proceeds from the sale of property, plant and equipment	5.9	1.3	4.6
Business acquisitions, net of cash acquired	(78.0)	(1.0)	(77.0)
Investments in equity securities	—	(5.6)	5.6
Purchase of noncontrolling interest	—	(1.0)	1.0
<b>Net cash used for investing activities</b>	<b>(110.9)</b>	<b>(47.3)</b>	<b>(63.6)</b>
<b>Cash flow before financing activities</b>	<b>\$ (43.3)</b>	<b>\$ 117.4</b>	<b>\$ (160.7)</b>

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Net cash provided by operating activities decreased \$97.1 million in 2018 compared with 2017, primarily as a result of the change in working capital items and the decrease in net income, partially offset by increased dividends from unconsolidated affiliates mainly due to the one-time benefit at HYGFS resulting from the Tax Reform Act. The change in working capital was primarily attributable to accounts payable in the Americas returning to normalized levels in 2018 following an unplanned systems-related acceleration of supplier payments in December 2016 and higher inventory levels, somewhat offset by the collection of KNSN Pipe & Pile Company Limited ("KNSN") receivables in June 2018 at Maximal. See Note 20 to the consolidated financial statements in this Annual Report on Form 10-K for further discussion of the Maximal acquisition.

The change in net cash used for investing activities during 2018 compared with 2017 is mainly the result of the acquisition of Maximal in the second quarter of 2018.

	2018	2017	Change
<b>Financing Activities:</b>			
Net addition (reduction) of long-term debt and revolving credit agreements	\$ (65.7)	\$ 78.0	\$ (143.7)
Cash dividends paid	(20.4)	(19.8)	(0.6)
Financing fees paid	(0.6)	(4.7)	4.1
Other	(0.9)	(0.4)	(0.5)
<b>Net cash provided by (used for) financing activities</b>	<b>\$ (87.6)</b>	<b>\$ 53.1</b>	<b>\$ (140.7)</b>

The change in net cash provided by (used for) financing activities of \$140.7 million in 2018 compared with 2017 was primarily related to the repayment of debt at Maximal and the Term Loan (as defined below) in 2018. The increase in 2017 was due to borrowings under the Term Loan, partially offset by repayments of borrowings under the Facility (as defined below) during 2017, primarily due to the unplanned systems-related acceleration of supplier payments in December 2016.

**Financing Activities**

The Company has a \$200.0 million secured, floating-rate revolving credit facility (the "Facility") that expires in April 2022. There were \$10.0 million of borrowings outstanding under the Facility at December 31, 2018. The availability under the Facility at December 31, 2018 was \$185.9 million, which reflects reductions of \$4.1 million for letters of credit and other restrictions. The Facility consists of a U.S. revolving credit facility in the amount of \$120.0 million and a non-U.S. revolving credit facility of \$80.0 million. The Facility can be increased up to \$300.0 million, subject to limits in the Term Loan (defined below), over the term of the agreement in minimum increments of \$10.0 million subject to certain conditions. The obligations under the Facility are generally secured by a lien on the working capital assets of the borrowers in the Facility, which include but are not limited to, cash and cash equivalents, accounts receivable and inventory and a second lien on the Term Loan Collateral (defined below). The approximate book value of assets held as collateral under the Facility was \$950 million as of December 31, 2018.

Borrowings bear interest at a floating rate based on a base rate or LIBOR, as defined in the Facility, plus an applicable margin. The applicable margins, as of December 31, 2018, for U.S. base rate loans and LIBOR loans were 0.25% and 1.25%, respectively. The applicable margin, as of December 31, 2018, for non-U.S. base rate loans and LIBOR loans was 1.25%. The applicable LIBOR interest rates under the Facility on December 31, 2018 were 2.44% and 1.25%, respectively, for the U.S. and non-U.S. facility including the applicable floating rate margin. The Facility also required the payment of a fee of 0.350% per annum on the unused commitment as of December 31, 2018.

The Facility includes restrictive covenants, which, among other things, limit additional borrowings and investments of the Company and its subsidiaries subject to certain thresholds, as defined in the Facility, and limits the payment of dividends. If availability for both total and U.S. revolving credit facilities on a pro forma basis, is greater than fifteen percent and less than or equal to twenty percent, the Company may pay dividends subject to achieving a minimum fixed charge coverage ratio of 1.00 to 1.00, as defined in the Facility. If the availability is greater than twenty percent for both total and U.S. revolving credit facilities on a pro forma basis, the Company may pay dividends without any minimum fixed charge coverage ratio requirement. The Facility also requires the Company to achieve a minimum fixed charge coverage ratio in certain circumstances in which total excess availability is less than ten percent of the total commitments under the Facility or excess

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availability under the U.S. revolving credit facility is less than ten percent of the U.S. revolver commitments, as defined in the Facility. At December 31, 2018, the Company was in compliance with the covenants in the Facility.

In 2017, the Company entered into an agreement for a \$200.0 million term loan (the "Term Loan"), which matures in May 2023. The Term Loan requires quarterly principal payments on the last business day of each March, June, September and December in an amount equal to \$2.5 million. Payments commenced in September 2017 and the final principal repayment is due on May 30, 2023. The Company may also be required to make mandatory prepayments, in certain circumstances, as provided in the Term Loan. At December 31, 2018, there was \$185.0 million of principle outstanding under the Term Loan which has been reduced in the consolidated balance sheet by \$3.7 million of discounts and unamortized deferred financing fees.

The obligations under the Term Loan are generally secured by a first priority lien on the present and future shares of capital stock, material real property, fixtures and general intangibles consisting of intellectual property (collectively, the "Term Loan Collateral") and a second priority lien on the remaining collateral of the U.S. borrowers in the Facility. The approximate book value of assets held as collateral under the Term Loan was \$610 million as of December 31, 2018.

Borrowings under the Term Loan bear interest at a floating rate, which can be a base rate or Eurodollar rate, as defined in the Term Loan, plus an applicable margin. The applicable margin, as provided in the Term Loan, is 2.25% for U.S. base rate loans and 3.25% for Eurodollar loans. The interest rate on the amount outstanding under the Term Loan at December 31, 2018 was 5.77%. In addition, the Term Loan includes restrictive covenants, which, among other things, limit additional borrowings and investments of the Company subject to certain thresholds, as provided in the Term Loan. The Term Loan limits the payment of regularly scheduled dividends and other restricted payments to \$50.0 million in any fiscal year, unless the consolidated total net leverage ratio, as defined in the Term Loan, does not exceed 1.75 to 1.00 at the time of the payment. At December 31, 2018, the Company was in compliance with the covenants in the Term Loan.

The Company incurred fees and expenses of \$0.6 million, \$4.7 million and 1.7 million in 2018, 2017 and 2016, respectively. These fees related to the amendment to the Facility and entry into the Term Loan. These fees were deferred and are being amortized as interest expense over the term of the applicable debt agreements. Fees related to the Term Loan are presented as a direct deduction of the corresponding debt.

The Company had other debt outstanding, excluding capital leases, of approximately \$92.9 million at December 31, 2018. In addition to the excess availability under the Facility, the Company had remaining availability of \$18.3 million related to other non-U.S. revolving credit agreements.

The Company believes funds available from cash on hand, the Term Loan, the Facility, other available lines of credit and operating cash flows will provide sufficient liquidity to meet its operating needs and commitments during the next twelve months and until the expiration of the Facility in April 2022.

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**Contractual Obligations, Contingent Liabilities and Commitments**

Following is a table summarizing the contractual obligations as of December 31, 2018 :

Contractual Obligations	Payments Due by Period						
	Total	2019	2020	2021	2022	2023	Thereafter
Term Loan	\$ 185.0	\$ 10.0	\$ 10.0	\$ 10.0	\$ 10.0	\$ 145.0	\$ —
Variable interest payments on Term Loan	40.2	10.2	9.5	8.9	8.4	3.2	—
Revolving credit agreements	13.3	13.3	—	—	—	—	—
Variable interest payments on revolving credit agreements	1.3	1.3	—	—	—	—	—
Other debt	89.6	62.3	16.8	4.7	5.6	0.2	—
Variable interest payments on other debt	2.7	1.8	0.6	0.2	0.1	—	—
Capital lease obligations including principal and interest	18.2	7.1	6.0	3.4	1.0	0.7	—
Operating leases	103.9	22.2	18.1	14.0	11.2	8.2	30.2
Tax Reform Act transition tax liability	13.9	—	0.7	1.4	1.4	2.6	7.8
Purchase and other obligations	617.9	608.0	1.1	2.0	3.1	—	3.7
<b>Total contractual cash obligations</b>	<b>\$ 1,086.0</b>	<b>\$ 736.2</b>	<b>\$ 62.8</b>	<b>\$ 44.6</b>	<b>\$ 40.8</b>	<b>\$ 159.9</b>	<b>\$ 41.7</b>

After the utilization of existing tax credits, the Company will pay total cash taxes, including state income taxes, of \$17.6 million with respect to the transition tax payable over an installment period of eight years. As a result of the Tax Reform Act, no additional income taxes or withholding taxes have been provided for any undistributed foreign earnings, nor any additional outside basis differences inherent in these entities, as these amounts continue to be indefinitely reinvested in non-U.S. operations.

The Company has a long-term liability of approximately \$20.5 million for unrecognized tax benefits, including interest and penalties, as of December 31, 2018 . At this time, the Company is unable to make a reasonable estimate of the timing of payments due to, among other factors, the uncertainty of the timing and outcome of the Company's audits.

An event of default, as defined in the agreements governing the Facility, the Term Loan, other debt agreements, and in operating and capital lease agreements, could cause an acceleration of the payment schedule. No such event of default has occurred or is anticipated under these agreements.

The Company's interest payments are calculated based upon the anticipated payment schedule and the December 31, 2018 applicable rates and applicable margins as described in the Facility and other debt agreements. A 1/8% increase in the LIBOR rate would increase the Company's estimated total interest payments on debt by \$0.2 million.

The purchase and other obligations are primarily for accounts payable, open purchase orders and accrued payroll and incentive compensation.

Pension funding can vary significantly each year due to plan amendments, changes in the market value of plan assets, legislation and the Company's funding decisions to contribute any excess above the minimum legislative funding requirements. As a result, pension funding has not been included in the table above. Pension benefit payments are made from assets of the pension plans. The Company expects to contribute approximately \$0.8 million to its non-U.S. pension plans in 2019 . No contributions to the Company's U.S. pension plans are expected in 2019 .

In addition, the Company has recourse and repurchase obligations with a maximum undiscounted potential liability of \$192.7 million at December 31, 2018 . Recourse and repurchase obligations primarily represent contingent liabilities assumed by the Company to support financing agreements made between the Company's customers and third-party finance companies for the customer's purchase of lift trucks from the Company. For these transactions, the Company or a third-party finance company retains a perfected security interest in the lift truck, such that the Company would take possession of the lift truck in the event it would become liable under the terms of the recourse and repurchase obligations. Generally, these commitments are due



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upon demand in the event of default by the customer. The security interest is normally expected to equal or exceed the amount of the commitment. To the extent the Company would be required to provide funding as a result of these commitments, the Company believes the value of its perfected security interest and amounts available under existing credit facilities are adequate to meet these commitments in the foreseeable future.

The amount of the recourse or repurchase obligations changes over time as obligations under existing arrangements expire and new obligations arise in the ordinary course of business. Losses anticipated under the terms of the recourse or repurchase obligations were not significant at December 31, 2018 and reserves have been provided for such losses in the consolidated financial statements included elsewhere in this Annual Report on Form 10-K. See also "Related Party Transactions" below.

**Capital Expenditures**

The following table summarizes actual and planned capital expenditures:

	Planned 2019	Actual 2018	Actual 2017
Lift truck business	\$ 60.3	\$ 31.8	\$ 35.3
Bolzoni	8.3	4.2	4.7
Nuvera	10.5	2.8	1.0
	<u>\$ 79.1</u>	<u>\$ 38.8</u>	<u>\$ 41.0</u>

Planned expenditures in 2019 are primarily for product development, improvements to information technology infrastructure, improvements at manufacturing locations and manufacturing equipment. The principal sources of financing for these capital expenditures are expected to be internally generated funds and bank financing.

**Capital Structure**

	December 31		Change
	2018	2017	
Cash and cash equivalents	\$ 83.7	\$ 220.1	\$ (136.4)
Other net tangible assets	601.3	527.8	73.5
Intangible assets	67.7	56.1	11.6
Goodwill	108.3	59.1	49.2
Net assets	<u>861.0</u>	<u>863.1</u>	<u>(2.1)</u>
Total debt	<u>(301.5)</u>	<u>(290.7)</u>	<u>(10.8)</u>
Total equity	<u>\$ 559.5</u>	<u>\$ 572.4</u>	<u>\$ (12.9)</u>
Debt to total capitalization	35%	34%	1%

**RELATED PARTY TRANSACTIONS**

See Note 19 to the consolidated financial statements in this Annual Report on Form 10-K for further discussion of related party transactions.

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**INVESTOR PERSPECTIVE**

The Company is currently undertaking the largest set of transformational programs in the Company's history. These programs are expected to have a very significant impact on the Company's competitiveness, market position and economic performance over the next three to five years.

For some time, the Company has been focused on six strategic initiatives:

1. Provide the lowest cost of ownership, while enhancing productivity for customers.
2. Be the leader in the delivery of industry- and customer-focused solutions.
3. Be the leader in independent distribution.
4. Grow in emerging markets.
5. Be the leader in the attachments business.
6. Be a leader in fuel cells and their applications.

The projects required to execute fully on these initiatives have been, in general, initiated over the last several years and many are now moving toward completion. Further, many of the projects supporting these strategic initiatives are inter-related and succeeding in one will foster success in others. In total, these projects have required significant up-front expense and capital expenditure investment. The projects cover a very broad range of the Company's activities, including product development, supply chain, IT, manufacturing, sales and marketing for each of the Company's three major businesses, Lift Truck, Bolzoni and Nuvera.

Over the course of 2017 and 2018, these investments, both expense and capital, increased significantly. Further, investment will continue to be made in 2019 and then generally remain at those levels for the next several years. The return from these investments has started to be realized and is expected to increase over the course of the Company's five-year planning period. In this context, the Lift Truck business income is expected to improve in 2019 over 2018, but results in the first half of the year are expected to be lower than the first half of 2018, and then improve in the second half. Beginning in 2020, further improved results are expected with significant increases through 2023. The Lift Truck business objective is to meet its target of 7% operating profit in this period assuming reasonable market conditions continue. Likewise, Bolzoni's results are expected to improve in 2019 and in the following years with a target of 7% operating profit. Nuvera's results are expected to improve moderately in the first three quarters of 2019 with a break-even target for both the fourth quarter and for the 2020 full year. Further, significantly improved earnings are expected at Nuvera in the 2021 to 2023 time period. At each of these three businesses, the investments being undertaken are expected to lead to increased operating profit through higher volume, decreased product costs and improved pricing, partially offset by a higher level of operating expense. Overall, 2019 consolidated operating profit is expected to increase significantly, with the improvement coming in the second half of the year.

The Lift Truck business product programs are expected to lay the groundwork for enhanced market position by providing lower cost of ownership and enhanced productivity for the Company's customers. At the core of these programs is a new set of modular and scalable product families covering both internal combustion engine and electric trucks, which will provide customers with enhanced flexibility for meeting their application needs combined with the benefit of lowest total cost of ownership. Implementation of these programs are expected to begin in 2020 with the introduction of a new range of counterbalanced trucks, with this range being expanded comprehensively through 2025 to include larger counterbalanced capacities, Big Trucks and warehouse trucks. A further major initiative in product offerings will come from the introduction of trucks manufactured by Maximal, HYG's new majority-owned joint venture in China. A line of trucks from Maximal has been engineered to provide high quality and reliable utility trucks for global markets and standard trucks for the Chinese market. In addition, Maximal and HYG's partner in India is expected to expand local production of larger trucks. Further, in early 2019, a new end rider was launched in the North America market, and a new Reach Truck for North America, as well as lower-cost Class 3 walkie and stacker global products are expected to be introduced later in the year. Rough terrain and electrified Big Truck products are being added to the product line-up. To further enhance productivity for customers, the Lift Truck business is developing automation solutions for warehouse trucks, initially in combination with industry partners. Some of these products are already in the market today, but new solutions and customers are expected to be developed progressively over the next several years. The Lift Truck business continues to expand sales of telemetry products and new generations of lift trucks will offer a fully integrated telematics solution. Finally, the Lift Truck business anticipates introducing new fuel cell BBRs for Class 1, 2 and 3 forklift trucks over the next two years that are expected to move the fuel cell BBR business to break-even in 2020.

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The introduction of these new products will lead to significant changes in supply chain sourcing and in the Company's various manufacturing facilities around the world. Consolidated component volume sourced globally from reliable partners is expected to reduce costs and improve quality as these new products are brought to market over the next two to three years. HYG's largest manufacturing facilities in Berea, Craigavon, and Greenville are expected to be structured to reduce costs and improve productivity while most other plants will see more modest changes. China production activities are expected to be consolidated at Maximal over the course of 2019.

The Lift Truck business currently has over 290 different forklift models in its range which are supported by the ability to customize these trucks to meet specific customer needs. The modular nature of the new products being introduced will enhance the ability to meet exact customer needs at lowest cost, both at the industry level and at the individual customer level. To ensure the full benefit from these programs, the Lift Truck business has made a substantial expense investment in its sales and marketing organizations to realign teams around industry groupings. Within marketing, industry-focused resources have been added to develop industry strategies. The higher-priority industry strategies have been completed for North America and Europe. All of the strategies are expected to be completed for all countries, or groups of countries, around the world by the end of 2019 but will mature and be enhanced over future years. To support execution of these industry strategies, the Lift Truck business has invested in additional industry-focused sales capabilities to support its dealers. This industry-focused structure has been in place and highly successful in the National Account direct sales program and is now being deployed with the new dealer support teams. These investments are largely in place in North America, and to a lesser degree in EMEA. Additional sales capabilities are expected to be added in other areas around the world over the next two years. In total, the Company believes that these projects will put it in a position to be a leader in the delivery of industry- and customer-focused solutions worldwide.

While the new sales teams will support dealers' sales efforts, the Company will also continue to upgrade its global dealer capabilities. A core objective is to have dealers that are fully capable of maximizing the potential of the Hyster<sup>®</sup> and Yale<sup>®</sup> brands in their territories. These dealers will be supported by a commitment to helping dealers strengthen the excellence of their activities in all areas of their business including leadership, sales, parts, service, rental, leasing and remarketing. To help these programs have maximum impact, the Company will be investing over the next few years in enhanced digital customer experience systems. Taken together, these initiatives amount to a new, uniquely competitive way of serving the markets around the world.

Bolzoni is also pursuing very aggressive projects to expand its global market position. This includes strengthening the Bolzoni's ability to serve the North America market by taking responsibility for HYG's Sulligent plant, where it will manufacture attachments and also continue the plant's support of the Lift Truck business through the sale of cylinders and various other components. Bolzoni will phase out production at its current Homewood, Illinois facility, but intends to maintain a distribution center and certain other operations in that area. There is a large opportunity for growth in the North America market. To help capture this, Bolzoni plans to introduce a broader range of locally produced attachments available with shorter lead times to serve its customer base. Bolzoni also has plans to increase its sales, marketing and product support capabilities in North America. In addition, it has developed a standard product line sourced from one of its factories in China, which will continue to be expanded. Bolzoni's current outstanding premium line of products coupled with these standard products and an industry-focused strategy are expected to give Bolzoni the ability to increase its sales significantly in the Americas, JAPIC and EMEA regions. Bolzoni's results have been improving on a progressive basis since its acquisition three years ago. These new programs are expected to increase the Company's market position and profitability, especially over the next three to four years.

Nuvera is approaching the point where it will move from being a venture business focused on commercializing leading technology to a mature, product-based company serving not only the forklift truck market, but also heavy-duty applications such as buses, trucks and applications in the automotive sector with an expanding line of developed products. Nuvera expects its core technology to move to a new generation of fuel cell stack design over the next year with broad application in each of these markets. Quality and cost of fuel cell engines have been improving and are expected to reach target objectives over the next two years. With the transfer of the responsibility for development of non-fuel-cell engine components and the overall assembly of BBRs to the Lift Truck business, Nuvera will focus entirely on fuel cell stacks and engines. To enhance its cost base, Nuvera continues to work on standardizing its products, developing lower cost suppliers and automating various elements of stack production. To help sharpen its focus on fuel cell stacks and engines, Nuvera sold its hydrogen-generating PowerTap<sup>®</sup> business to a third-party, OneH2, Inc. ("OneH2"), in exchange for a note and a minority ownership interest in

**Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS  
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*(Tabular Amounts in Millions, Except Per Share, Percentage Data and as Otherwise Noted)*

OneH2. OneH2 has developed an important option for hydrogen fuel supply for forklift truck fuel cell users. In overview, Nuvera's objective is to reach break-even in both the fourth quarter of 2019 and the full year of 2020, with a move toward target profitability over the following three years.

In summary, the Company believes it is approaching an inflection point in its business. While the early part of 2019 is expected to reflect continued investment in all of these programs, the second half of 2019 is expected to be significantly improved in comparison to the second half of 2018. The Company's efforts to find offsets to the tariff-driven unprecedented material cost inflation witnessed in 2018 will mature during 2019, and efforts to abate the most critical supplier issues, which are still having an impact on production, are underway with most expected to be resolved by mid-year. The current lift truck backlog contains certain deal-specific pricing agreements at less than target margins to gain targeted accounts and for which margin improvement efforts will take some time to mature. These deals will have an impact on profitability, mainly in the first half of the year. Generally, margins are expected to recover fully from the 2018 material cost inflation and the heavily discounted deals by the third and fourth quarters of 2019. In 2020 and 2021, a considerable portion of the new projects outlined above will have reached completion for all three companies and the Company believes the full impact of these programs can lead to profitability improvements for a number of years to come. Finally, the remainder of the programs are expected to come to fruition in 2022 and 2023, with a few, particularly those involving dealer structure and excellence, being more in the nature of continuous improvement rather than projects which reach maturity at a given time. However, the absolute level of profitability will reflect actual market demand levels. The Company is currently forecasting strong but moderating forklift market levels and a resolution to Brexit in a way which does not significantly harm the Company's business prospects.

The Company believes that investors who are focused on mid-term business improvement in market position and profitability will find that the Company's focus is consistent with those investment objectives.

**RECENTLY ISSUED ACCOUNTING STANDARDS**

For information regarding recently issued accounting standards refer to Note 2 to the Consolidated Financial Statements in this Form 10-K.

**EFFECTS OF FOREIGN CURRENCY**

The Company operates internationally and enters into transactions denominated in foreign currencies. As a result, the Company is subject to the variability that arises from exchange rate movements. The effects of foreign currency fluctuations on revenues, operating profit and net income are addressed in the previous discussions of operating results. The Company's use of foreign currency derivative contracts is discussed in Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of this Form 10-K.

**FORWARD-LOOKING STATEMENTS**

The statements contained in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere throughout this Annual Report on Form 10-K that are not historical facts are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements are made subject to certain risks and uncertainties, which could cause actual results to differ materially from those presented. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. The Company undertakes no obligation to publicly revise these forward-looking statements to reflect events or circumstances that arise after the date hereof. Among the factors that could cause plans, actions and results to differ materially from current expectations are, without limitation: (1) reduction in demand for lift trucks, attachments and related aftermarket parts and service on a global basis, (2) delays in delivery or increases in costs, including transportation costs or the imposition of tariffs, of raw materials or sourced products and labor or changes in or unavailability of quality suppliers, (3) delays in manufacturing and delivery schedules, (4) the successful commercialization of Nuvera's technology, (5) customer acceptance of pricing, (6) the political and economic uncertainties in the countries where the Company does business, (7) the ability of dealers, suppliers and end-users to obtain financing at reasonable rates, or at all, as a result of current economic and market conditions, (8) exchange rate fluctuations and monetary policies and other changes in the regulatory climate in the countries in which the Company operates and/or sells products, (9) bankruptcy of or loss of major

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dealers, retail customers or suppliers, (10) customer acceptance of, changes in the costs of, or delays in the development of new products, (11) introduction of new products by, or more favorable product pricing offered by, competitors, (12) product liability or other litigation, warranty claims or returns of products, (13) the effectiveness of the cost reduction programs implemented globally, including the successful implementation of procurement and sourcing initiatives, (14) changes mandated by federal, state and other regulation, including tax, health, safety or environmental legislation, (15) unfavorable effects of geopolitical and legislative developments on global operations, including without limitation, the United Kingdom's exit from the European Union, the entry into new trade agreements and the imposition of tariffs and/or economic sanctions, (16) the Company may not be able to successfully integrate Maximal's operations and employees, and (17) delays in or increased costs of moving the attachment manufacturing from Homewood, Illinois to Sulligent, Alabama.

**Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

**INTEREST RATE RISK**

The Company has entered into certain financing arrangements that require interest payments based on floating interest rates. As such, the Company's financial results are subject to changes in the market rate of interest. The Company has entered into interest rate swap agreements to reduce the exposure to changes in the market rate of interest. The Company does not enter into interest rate swap agreements for trading purposes. Terms of the interest rate swap agreements require the Company to receive a variable interest rate and pay a fixed interest rate. See also Note 9 to the Consolidated Financial Statements in this Annual Report on Form 10-K.

For purposes of risk analysis, the Company uses sensitivity analysis to measure the potential loss in fair value of financial instruments sensitive to changes in interest rates. The Company assumes that a loss in fair value is either a decrease to its assets or an increase to its liabilities. The fair value of the Company's interest rate swap agreements was a net asset of \$1.6 million at December 31, 2018 . A hypothetical 10% decrease in interest rates would cause a decrease in the fair value of interest rate swap agreements and the resulting fair value would be a liability of \$1.5 million.

**FOREIGN CURRENCY EXCHANGE RATE RISK**

The Company operates internationally and enters into transactions denominated in foreign currencies. As such, the Company's financial results are subject to the variability that arises from exchange rate movements. The Company uses forward foreign currency exchange contracts to partially reduce risks related to transactions denominated in foreign currencies and not for trading purposes. These contracts generally mature within 36 months and require the companies to buy or sell euros, U.S. dollars, Japanese yen, British pounds, Swedish kroner, Mexican pesos, Chinese renminbi, Brazilian real and Australian dollars for its functional currency at rates agreed to at the inception of the contracts. The fair value of these contracts was a net liability of \$19.5 million at December 31, 2018 . See also Note 9 to the Consolidated Financial Statements in this Annual Report on Form 10-K.

For purposes of risk analysis, the Company uses sensitivity analysis to measure the potential loss in fair value of financial instruments sensitive to changes in foreign currency exchange rates. The Company assumes that a loss in fair value is either a decrease to its assets or an increase to its liabilities. Assuming a hypothetical 10% weakening of the U.S. dollar compared with other foreign currencies at December 31, 2018 , the fair value of foreign currency-sensitive financial instruments, which primarily represent forward foreign currency exchange contracts, would be decreased by \$7.5 million compared with the fair value at December 31, 2018 . It is important to note that the change in fair value indicated in this sensitivity analysis would be somewhat offset by changes in the revaluation of the underlying receivables and payables.

**Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

The information required by this Item 8 is set forth in the Financial Statements and Supplementary Data contained in Part IV of this Annual Report on Form 10-K and is hereby incorporated herein by reference to such information.

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

There were no disagreements with accountants on accounting and financial disclosure for the three-year period ended December 31, 2018 .

## **Item 9A . CONTROLS AND PROCEDURES**

**Evaluation of disclosure controls and procedures:** An evaluation was carried out under the supervision and with the participation of the Company's management, including the principal executive officer and the principal financial officer, of the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, these officers have concluded that the Company's disclosure controls and procedures were effective.

**Management's report on internal control over financial reporting:** Management is responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision and with the participation of management, including the principal executive officer and principal financial officer, the Company conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on this evaluation under the framework in Internal Control — Integrated Framework, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2018 . The Company's effectiveness of internal control over financial reporting has been audited by Ernst & Young, LLP, an independent registered public accounting firm, as stated in its report, which is included in Item 15 of this Annual Report on Form 10-K and is incorporated herein by reference. Management has excluded Maximal from its assessment of the Company's disclosure controls and procedures because the Company acquired a majority interest in Maximal on June 1, 2018. As of December 31, 2018, Maximal constituted approximately 9% of the Company's total assets and approximately 2% of the Company's revenues for the year ended December 31, 2018.

**Changes in internal control:** During the fourth quarter of 2018 , there have been no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

## **Item 9B . OTHER INFORMATION**

None

## **PART III**

### **Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Information required by this Item 10 of Part III will be included in the 2019 Proxy Statement, which information is incorporated herein by reference.

Information regarding the executive officers of the Company is included in this Annual Report on Form 10-K as Item 4A of Part I as permitted by Instruction 3 to Item 401(b) of Regulation S-K.

The Company has adopted a code of ethics applicable to all Company personnel, including the principal executive officer, principal financial officer, principal accounting officer and controller, or other persons performing similar functions. The code of ethics, entitled the "Code of Corporate Conduct," is posted on the Company's website at [www.hyster-yale.com](http://www.hyster-yale.com) under "Corporate Governance." Amendments and waivers of the Company's Code of Corporate Conduct for directors or executive officers of the Company, if any, will be disclosed on the Company's website or on a current report on Form 8-K.

### **Item 11. EXECUTIVE COMPENSATION**

Information required by this Item 11 of Part III will be included in the 2019 Proxy Statement, which information is incorporated herein by reference.

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

Information required by this Item 12 of Part III will be included in the 2019 Proxy Statement, which information is incorporated herein by reference.

**Equity Compensation Plan Information**

The following table sets forth information as of December 31, 2018 with respect to our compensation plans (including individual compensation arrangements) under which equity securities are authorized for issuance, aggregated as follows:

Plan Category	Number of Securities to Be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))
(a)	(b)	(c)	
<b>Class A Shares:</b>			
Equity compensation plans approved by security holders	—	N/A	421,785
Equity compensation plans not approved by security holders	—	N/A	—
<b>Total</b>	<b>—</b>	<b>N/A</b>	<b>421,785</b>
<b>Class B Shares:</b>			
Equity compensation plans approved by security holders	—	N/A	—
Equity compensation plans not approved by security holders	—	N/A	—
<b>Total</b>	<b>—</b>	<b>N/A</b>	<b>—</b>

**Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

Information required by this Item 13 of Part III will be included in the 2019 Proxy Statement, which information is incorporated herein by reference.

**Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Information required by this Item 14 of Part III will be included in the 2019 Proxy Statement, which information is incorporated herein by reference.

**PART IV****Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a) (1) The response to Item 15(a)(1) is set forth beginning at page F-1 of this Annual Report on Form 10-K.

(a) (2) The response to Item 15(a)(2) is set forth beginning at page F-47 of this Annual Report on Form 10-K.

(a) (3) Listing of Exhibits — See the exhibit index beginning at page 35 of this Annual Report on Form 10-K.

(b) The response to Item 15(b) is set forth beginning at page 35 of this Annual Report on Form 10-K.



**EXHIBIT INDEX**

(2) Plan of Acquisition, Reorganization, Arrangement, Liquidation or Succession.

- 2.1 [Purchase Agreement, dated February 14, 2016, by and among Hyster-Yale Materials Handling, Inc., as Purchaser, and Emilio Bolzoni, Roberto Scotti, Franco Bolzoni, Paolo Mazzoni and Pier Luigi Magnelli, as Sellers is incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, dated February 14, 2016, Commission File Number 000-54799.](#)
- 2.2 [Amendment Agreement, dated April 1, 2016, by and among Hyster-Yale Capital Holding Italy S.r.l., as Purchaser, and Emilio Bolzoni, Roberto Scotti, Franco Bolzoni, Paolo Mazzoni and Pier Luigi Magnelli, as Sellers is incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, dated April 1, 2016, Commission File Number 000-54799.](#)

(3) Articles of Incorporation and By-laws.

- 3.1(i) [Second Amended and Restated Certificate of Incorporation of Hyster-Yale Materials Handling, Inc. is incorporated by reference to Exhibit 3.1 to Hyster-Yale Materials Handling, Inc.'s Amendment No. 5 to the Registration Statement on Form S-1, dated September 26, 2012, Commission File No. 333-182388.](#)
- 3.1(ii) [Amended and Restated By-laws of Hyster-Yale Materials Handling, Inc. are incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, dated February 17, 2015, Commission File No. 000-54799.](#)

(4) Instruments defining the rights of security holders, including indentures.

- 4.1 [Specimen of Hyster-Yale Materials Handling, Inc. Class A Common Stock certificate is incorporated by reference to Exhibit 4.1 to Hyster-Yale Materials Handling, Inc.'s Registration Statement on Form S-1, dated June 28, 2012, Commission File No. 333-182388.](#)
- 4.2 [Specimen of Hyster-Yale Materials Handling, Inc. Class B Common Stock certificate is incorporated by reference to Exhibit 4.2 to Hyster-Yale Materials Handling, Inc.'s Registration Statement on Form S-1, dated June 28, 2012, Commission File No. 333-182388.](#)

(10) Material Contracts.

- 10.1 [Tax Allocation Agreement, dated September 28, 2012, by and between NACCO Industries, Inc. and Hyster-Yale Materials Handling, Inc. is incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, dated October 4, 2012, Commission File Number 1-35646.](#)
- 10.2 [Stockholders' Agreement, dated as of September 28, 2012, by and among the Participating Stockholders \(as defined therein\), Hyster-Yale Materials Handling, Inc. and the Depository \(as defined therein\) is incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K, dated October 4, 2012, Commission File No. 1-35646.](#)
- 10.3 [First Amendment to Stockholders' Agreement, dated as of December 31, 2012, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is incorporated by reference to Exhibit 10.5 to the Company's Annual Report on Form 10-K, filed by the Company on February 19, 2013, Commission File Number 000-54799.](#)
- 10.4 [Second Amendment to Stockholders' Agreement, dated as of January 18, 2013, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is incorporated by reference to Exhibit 10.6 to the Company's Annual Report on Form 10-K, filed by the Company on February 19, 2013, Commission File Number 000-54799.](#)
- 10.5 [Third Amendment to Stockholders' Agreement, dated as of March 27, 2015, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on April 29, 2015, Commission File Number 000-54799.](#)
- 10.6 [Fourth Amendment to Stockholders' Agreement, dated as of December 29, 2015, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is incorporated by reference to Exhibit 10 filed with Amendment No. 4 to the Statement on Schedule 13D, filed by the Reporting Persons named therein on February 16, 2016, Commission File Number 005-87003.](#)

- 10.7 [Fifth Amendment to Stockholders' Agreement, dated as of December 2, 2016, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is incorporated by reference to Exhibit No. 11 filed with Amendment No. 5 to the Statement on Schedule 13D, filed by the reporting persons named therein on February 14, 2017, Commission File Number 005-38001.](#)
- 10.8 [Sixth Amendment to Stockholders' Agreement, dated as of December 22, 2016, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is incorporated by reference to Exhibit No. 12 filed with Amendment No. 5 to the Statement on Schedule 13D, filed by the reporting persons named therein on February 14, 2017, Commission File Number 005-38001.](#)
- 10.9 [Seventh Amendment to Stockholders' Agreement, dated as of February 6, 2017, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on May 2, 2017, Commission File Number 000-54799.](#)
- 10.10 [Eighth Amendment to Stockholders' Agreement, dated as of October 30, 2018, by and among the Depository, Hyster-Yale Materials Handling, Inc., the new Participating Stockholder identified on the signature pages thereto and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended, by and among the Depository, Hyster-Yale Materials Handling, Inc. and the Participating Stockholders is attached hereto.](#)
- 10.11\* [The Hyster-Yale Group, Inc. Executive Excess Retirement Plan \(Effective as of January 1, 2016\) is incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K, filed by the Company on February 28, 2017, Commission File Number 000-54799.](#)
- 10.12\* [Hyster-Yale Materials Handling, Inc. Long-Term Equity Incentive Plan \(Effective September 28, 2012\), is incorporated by reference to Exhibit 10.15 to the Company's Annual Report on Form 10-K, filed by the Company on February 27, 2018, Commission File Number 000-54799.](#)
- 10.13\* [Form Award Agreement for the Hyster-Yale Materials Handling, Inc. Long-Term Equity Incentive Plan \(Effective as of the Spin-Off Date\) is incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K, filed by the Company on February 19, 2015, Commission File Number 000-54799.](#)
- 10.14\* [Hyster-Yale Materials Handling, Inc. Supplemental Long-Term Equity Incentive Plan \(Effective as of the Spin-Off Date\) is incorporated by reference to Exhibit 10.67 to Hyster-Yale Materials Handling, Inc.'s Amendment No. 3 to the Registration Statement on Form S-1, dated September 13, 2012, Commission File Number 333-182388.](#)
- 10.15\* [Form Award Agreement for the Hyster-Yale Materials Handling, Inc. Supplemental Long-Term Equity Incentive Plan \(Effective as of the Spin-Off Date\) is incorporated by reference to Exhibit 10.68 to Hyster-Yale Materials Handling, Inc.'s Amendment No. 3 to the Registration Statement on Form S-1, dated September 13, 2012, Commission File Number 333-182388.](#)
- 10.16\* [Hyster-Yale Materials Handling, Inc. Non-Employee Directors' Equity Compensation Plan is incorporated by reference to Exhibit 10.69 to Hyster-Yale Materials Handling, Inc.'s Amendment No. 3 to the Registration Statement on Form S-1, dated September 13, 2012, Commission File Number 333-182388.](#)
- 10.17\* [Hyster-Yale Materials Handling, Inc. and Subsidiaries Director Fee Policy \(Amended Effective as of January 1, 2018\) is incorporated by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K, filed by the Company on February 27, 2018, Commission File Number 000-54799.](#)
- 10.18\* [Hyster-Yale Materials Handling, Inc. and Subsidiaries Director Fee Policy \(Amended Effective as of January 1, 2019\) is attached hereto.](#)
- 10.19\* [The Hyster-Yale Group, Inc. Unfunded Benefit Plan \(As Amended and Restated as of January 1, 2016\) is incorporated by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K, filed by the Company on February 28, 2017, Commission File Number 000-54799.](#)
- 10.20\* [Amendment No. 1 to the Hyster-Yale Group, Inc. Unfunded Benefit Plan \(As Amended and Restated as of January 1, 2016\) is attached hereto.](#)
- 10.21\* [The Hyster-Yale Group, Inc. Long-Term Incentive Compensation Plan \(Amended and Restated Effective as of January 1, 2016\) is incorporated by reference to Exhibit 10.24 to the Company's Annual Report on Form 10-K, filed by the Company on February 28, 2017, Commission File Number 000-54799.](#)
- 10.22\* [The Hyster-Yale Group Inc. Annual Incentive Compensation Plan \(Amended and Restated Effective as of January 1, 2016\) is incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K, filed by the Company on February 28, 2017, Commission File Number 000-54799.](#)
- 10.23\* [Hyster-Yale Group, Inc. Excess Retirement Plan \(Amended and Restated Effective January 1, 2016\) is incorporated by reference to Exhibit 10.35 to the Company's Annual Report on Form 10-K, filed by the Company on February 17, 2016, Commission File Number 000-54799.](#)

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- 10.24\* [Amendment No. 1 to the Hyster-Yale Group, Inc. Excess Retirement Plan \(As Amended and Restated as of January 1, 2016\) is attached hereto.](#)
- 10.25 [Equity joint venture contract, dated November 27, 1997, between Shanghai Perfect Jinqiao United Development Company Ltd., People's Republic of China, NACCO Materials Handling Group, Inc., USA, and Sumitomo-Yale Company Ltd., Japan is incorporated by reference to Exhibit 10.3 to NMHG Holding Co.'s Registration Statement on Form S-4, dated May 28, 2002, Commission File Number 333-89248.](#)
- 10.26 [Third Amended and Restated Joint Venture and Shareholders Agreement between Wells Fargo Financial Leasing, Inc. and Hyster-Yale Group, Inc., dated September 17, 2018 is incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, Commission File Number 000-54799.](#)
- 10.27 [A\\$ Facility Agreement, dated November 22, 2000, between GE Capital Australia and National Fleet Network Pty Limited is incorporated by reference to Exhibit 10.12 to NMHG Holding Co.'s Registration Statement on Form S-4, dated May 28, 2002, Commission File Number 333-89248.](#)
- 10.28 [Second Amended and Restated Recourse and Indemnity Agreement, dated September 17, 2018, by and between Wells Fargo Financial Leasing, Inc., HYG Financial Services, Inc. and Hyster-Yale Group, Inc. is incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, Commission File Number 000-54799.](#)
- 10.29 [First Amended and Restated Guarantee Agreement, dated September 17, 2018, by Hyster-Yale Materials Handling, Inc. in favor of Wells Fargo Financial Leasing, Inc. is incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, Commission File Number 000-54799.](#)
- 10.30 [First Amended and Restated Guarantee Agreement, dated September 17, 2018, by Hyster-Yale Group, Inc. in favor of Wells Fargo Financial Leasing, Inc. is incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, Commission File Number 000-54799.](#)
- 10.31 [Loan, Security and Guaranty Agreement dated as of April 28, 2016 among Hyster-Yale Materials Handling, Inc. and Hyster-Yale Group, Inc., as U.S. Borrowers, Hyster-Yale Nederland B.V., Hyster-Yale International B.V., Hyster-Yale Holding B.V. and Hyster-Yale Capital Holding B.V., as Dutch Borrowers, Hyster-Yale UK Limited and Hyster-Yale Capital UK Limited, as UK Borrowers, any other Borrowers party thereto from time to time and certain Persons party thereto from time to time as Guarantors, certain financial institutions, as Lenders, Bank of America, N.A., as Administrative Agent and Security Trustee, Merrill Lynch, Pierce, Fenner & Smith Incorporated and CitiGroup Global Markets Inc., as Joint Lead Arrangers and Joint Book Managers, and CitiBank, N.A., as Syndication Agent is incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, dated April 28, 2016, Commission File Number 000-54799.](#)
- 10.32 [First Amendment to Amended and Restated Loan, Security and Guaranty Agreement dated as of May 30, 2017 among Hyster-Yale Materials Handling, Inc. and Hyster-Yale Group, Inc., as U.S. Borrowers, Hyster-Yale Nederland B.V., Hyster-Yale International B.V., Hyster-Yale Holding B.V. and Bolzoni Capital Holding B.V., as Dutch Borrowers, Hyster-Yale UK Limited and Bolzoni Capital UK Limited, as UK Borrowers, any other Borrowers party thereto from time to time and certain Persons party thereto from time to time as Guarantors, certain financial institutions, as Lenders, Bank of America, N.A., as Administrative Agent and Security Trustee is incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, Commission File Number 000-54799.](#)
- 10.33 [Second Amendment to Amended and Restated Loan, Security and Guaranty Agreement, dated as of March 14, 2018, among Hyster-Yale Materials Handling, Inc. and Hyster-Yale Group, Inc., as U.S. Borrowers, Hyster-Yale Nederland B.V., Hyster-Yale International B.V., Hyster-Yale Holding B.V. and Bolzoni Capital Holding B.V., as Dutch Borrowers, Hyster-Yale UK Limited and Bolzoni Capital UK Limited, as UK Borrowers, any other Borrowers party thereto from time to time and certain Persons party thereto from time to time as Guarantors, certain financial institutions, as Lenders, Bank of America, N.A., as Administrative Agent and Security Trustee is incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, Commission File Number 000-54799.](#)
- 10.34 [Term Loan Credit Agreement dated as of May 30, 2017 among Hyster-Yale Group, Inc. as the Borrower, Hyster-Yale Materials Handling, Inc., Bank of America, N.A., as Administrative Agent is incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, Commission File Number 000-54799.](#)
- 10.35 [First Amendment to Term Loan Credit Agreement, dated as of March 14, 2018, by and among Hyster-Yale Group, Inc., as the Borrower, Hyster-Yale Materials Handling, Inc. and Bank of America, N.A., as Administrative Agent is incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, Commission File Number 000-54799.](#)
- 10.36 [Commitment Agreement for the Purchase and Sale of Real Estate and Other Covenants, dated May 23, 2013, by and between NACCO Materials Handling Group Brasil Ltda. and Synergy Empreendimentos E Participacoes Ltda. is incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013, Commission File Number 000-54799.](#)
- 10.37 [Amendment to the Commitment Agreement for the Purchase and Sale of Real Estate and Other Covenants, dated May 23, 2013, by and between NACCO Materials Handling Group Brasil Ltda. and Synergy Empreendimentos E Participacoes Ltda. is incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013, Commission File Number 000-54799.](#)

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- 10.38 [Letter Agreement, dated August 1, 2013, between Synergy Empreendimentos E Participacoes Ltda. and NACCO Materials Handling Group Brasil Ltda. Amending the Commitment Agreement for the Purchase and Sale of Real Estate and Other Covenants is incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013, Commission File Number 000-54799.](#)
- 10.39 [Equity Transfer Agreement, dated December 6, 2017, by and between KNSN Pipe & Pile Company Limited and Hyster-Yale Acquisition Holding LTD Regarding Zhejiang Maximal Forklift Co., LTD. is incorporated by reference to Exhibit 10.57 to the Company's Annual Report on Form 10-K, filed by the Company on February 27, 2018, Commission File Number 000-54799.](#)
- (21) Subsidiaries.
- 21.1 [A list of the subsidiaries of the Company is attached hereto.](#)
- (23) Consents of experts and counsel.
- 23.1 [Consent of Ernst & Young LLP.](#)
- (24) Powers of Attorney.
- 24.1 [A copy of a power of attorney for James B. Bemowski is attached hereto.](#)
- 24.2 [A copy of a power of attorney for John C. Butler Jr. is attached hereto.](#)
- 24.3 [A copy of a power of attorney for Carolyn Corvi is attached hereto.](#)
- 24.4 [A copy of a power of attorney for John P. Jumper is attached hereto.](#)
- 24.5 [A copy of a power of attorney for Dennis W. LaBarre is attached hereto.](#)
- 24.6 [A copy of a power of attorney for H. Vincent Poor is attached hereto.](#)
- 24.7 [A copy of a power of attorney for Claiborne R. Rankin is attached hereto.](#)
- 24.8 [A copy of a power of attorney for John M. Stropki is attached hereto.](#)
- 24.9 [A copy of a power of attorney for Britton T. Taplin is attached hereto.](#)
- 24.10 [A copy of a power of attorney for Eugene Wong is attached hereto.](#)
- (31) Rule 13a-14(a)/15d-14(a) Certifications.
- 31(i)(1) [Certification of Alfred M. Rankin, Jr. pursuant to Rule 13a-14\(a\)/15d-14\(a\) of the Exchange Act is attached hereto.](#)
- 31(i)(2) [Certification of Kenneth C. Schilling pursuant to Rule 13a-14\(a\)/15d-14\(a\) of the Exchange Act is attached hereto.](#)
- (32) [Certifications pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, signed and dated by Alfred M. Rankin, Jr. and Kenneth C. Schilling](#)
- 101.SCH XBRL Taxonomy Extension Schema Document
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document
- \* Management contract or compensation plan or arrangement required to be filed as an exhibit pursuant to Item15(b) of this Annual Report on Form 10-K.

**Item 16. FORM 10-K SUMMARY**

None

**SIGNATURES**

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

Hyster-Yale Materials Handling, Inc.

By: /s/ Kenneth C. Schilling

Kenneth C. Schilling

Senior Vice President and Chief Financial Officer (principal financial and accounting officer)

February 26, 2019

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

<u>/s/ Alfred M. Rankin, Jr.</u> Alfred M. Rankin, Jr.	Chairman, President and Chief Executive Officer (principal executive officer), Director	February 26, 2019
<u>/s/ Kenneth C. Schilling</u> Kenneth C. Schilling	Senior Vice President and Chief Financial Officer (principal financial and accounting officer)	February 26, 2019
<u>* James B. Bemowski</u> James B. Bemowski	Director	February 26, 2019
<u>* J.C. Butler, Jr.</u> J.C. Butler, Jr.	Director	February 26, 2019
<u>* Carolyn Corvi</u> Carolyn Corvi	Director	February 26, 2019
<u>* John P. Jumper</u> John P. Jumper	Director	February 26, 2019
<u>* Dennis W. LaBarre</u> Dennis W. LaBarre	Director	February 26, 2019
<u>* H. Vincent Poor</u> H. Vincent Poor	Director	February 26, 2019
<u>* Claiborne R. Rankin</u> Claiborne R. Rankin	Director	February 26, 2019
<u>* John M. Stropki</u> John M. Stropki	Director	February 26, 2019
<u>* Britton T. Taplin</u> Britton T. Taplin	Director	February 26, 2019
<u>* Eugene Wong</u> Eugene Wong	Director	February 26, 2019

\* Kenneth C. Schilling, by signing his name hereto, does hereby sign this Annual Report on Form 10-K on behalf of each of the above named and designated directors of the Company pursuant to a Power of Attorney executed by such persons and filed with the Securities and Exchange Commission.

/s/ Kenneth C. Schilling  
Kenneth C. Schilling, Attorney-in-Fact

February 26, 2019

**ANNUAL REPORT ON FORM 10-K**  
**ITEM 8, ITEM 15(a)(1) AND (2)**  
**FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**  
**LIST OF FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULE**  
**FINANCIAL STATEMENTS**  
**FINANCIAL STATEMENT SCHEDULE**  
**YEAR ENDED DECEMBER 31, 2018**  
**HYSTER-YALE MATERIALS HANDLING, INC.**  
**CLEVELAND, OHIO**



**FORM 10-K**

**ITEM 15(a)(1) AND (2)**

**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

**LIST OF FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULE**

The following consolidated financial statements of Hyster-Yale Materials Handling, Inc. and Subsidiaries are incorporated by reference in Item 8:

<a href="#">Report of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm — For each of the three years in the period ended December 31, 2018</a>	<a href="#">F-3</a>
<a href="#">Report of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm on Internal Control over Financial Reporting — as of December 31, 2018</a>	<a href="#">F-4</a>
<a href="#">Consolidated Statements of Operations</a>	<a href="#">F-5</a>
<a href="#">Consolidated Statements of Comprehensive Income (Loss)</a>	<a href="#">F-6</a>
<a href="#">Consolidated Balance Sheets</a>	<a href="#">F-7</a>
<a href="#">Consolidated Statements of Cash Flows</a>	<a href="#">F-8</a>
<a href="#">Consolidated Statements of Equity</a>	<a href="#">F-9</a>
<a href="#">Notes to Consolidated Financial Statements.</a>	<a href="#">F-11</a>

The following consolidated financial statement schedule of Hyster-Yale Materials Handling, Inc. and Subsidiaries are included in Item 15(a):

<a href="#">Schedule II — Valuation and Qualifying Accounts</a>	<a href="#">F-47</a>
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All other schedules for which provision is made in the applicable accounting regulation of the SEC are not required under the related instructions or are inapplicable, and therefore have been omitted.

**Report of Independent Registered Public Accounting Firm**

To the Shareholders and the Board of Directors of Hyster-Yale Materials Handling, Inc.

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Hyster-Yale Materials Handling, Inc. and Subsidiaries (“the Company”) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income (loss), cash flows and equity for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, 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, 2019 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 provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

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

Cleveland, Ohio  
February 26, 2019

## Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Hyster-Yale Materials Handling, Inc.

### Opinion on Internal Control over Financial Reporting

We have audited Hyster-Yale Materials Handling, Inc. and Subsidiaries' ("the Company") internal control over financial reporting as of December 31, 2018, 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, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, 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 Zhejiang Maximal Forklift Co., Ltd. ("Maximal"), which is included in the 2018 consolidated financial statements of the Company and constituted 9% of total assets as of December 31, 2018 and 2% of revenues 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 Maximal.

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, 2018 and 2017, the related consolidated statements of operations, comprehensive income (loss), cash flows and equity for each of the three years in the period ended December 31, 2018 and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated February 26, 2019 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 in Item 9A. 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

Cleveland, Ohio

February 26, 2019

**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Year Ended December 31		
	2018	2017	2016
	(In millions, except per share data)		
<b>Revenues</b>	<b>\$ 3,174.4</b>	<b>\$ 2,885.2</b>	<b>\$ 2,569.7</b>
Cost of sales	2,677.3	2,382.6	2,142.2
<b>Gross Profit</b>	<b>497.1</b>	<b>502.6</b>	<b>427.5</b>
<b>Operating Expenses</b>			
Selling, general and administrative expenses	458.3	428.5	394.6
<b>Operating Profit</b>	<b>38.8</b>	<b>74.1</b>	<b>32.9</b>
Other (income) expense			
Interest expense	16.0	14.6	6.7
Income from unconsolidated affiliates	(10.0)	(28.0)	(7.1)
Other, net	(3.8)	(6.3)	(5.0)
	2.2	(19.7)	(5.4)
<b>Income Before Income Taxes</b>	<b>36.6</b>	<b>93.8</b>	<b>38.3</b>
Income tax provision (benefit)	2.3	44.9	(4.0)
<b>Net Income</b>	<b>34.3</b>	<b>48.9</b>	<b>42.3</b>
Net (income) loss attributable to noncontrolling interest	0.4	(0.3)	0.5
<b>Net Income Attributable to Stockholders</b>	<b>\$ 34.7</b>	<b>\$ 48.6</b>	<b>\$ 42.8</b>
<b>Basic Earnings per Share Attributable to Stockholders</b>	<b>\$ 2.10</b>	<b>\$ 2.95</b>	<b>\$ 2.61</b>
<b>Diluted Earnings per Share Attributable to Stockholders</b>	<b>\$ 2.09</b>	<b>\$ 2.94</b>	<b>\$ 2.61</b>

See Notes to Consolidated Financial Statements.

**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**

	Year Ended December 31		
	2018	2017	2016
	(In millions)		
<b>Net Income</b>	<b>\$ 34.3</b>	<b>\$ 48.9</b>	<b>\$ 42.3</b>
Other comprehensive income (loss)			
Foreign currency translation adjustment	(27.4)	33.5	(1.9)
Unrealized gain on available-for-sale securities, net of \$0.5 tax expense in 2017	—	2.8	—
Current period cash flow hedging activity, net of \$4.6 tax benefit in 2018, net of \$8.0 tax expense in 2017 and net of \$6.5 tax benefit in 2016	(12.2)	6.6	(9.0)
Reclassification of hedging activities into earnings, net of \$0.8 tax benefit in 2018, net of \$1.6 tax expense in 2017 and net of \$2.2 tax expense in 2016	(1.8)	4.1	0.8
Current period pension adjustment, net of \$4.3 tax benefit in 2018, net of \$3.7 tax expense in 2017 and net of \$3.8 tax benefit in 2016	(20.1)	13.1	(17.4)
Reclassification of pension into earnings, net of \$0.7 tax expense in 2018, net of \$1.0 tax expense in 2017 and net of \$0.7 tax expense in 2016	2.9	3.2	2.0
<b>Comprehensive Income (Loss)</b>	<b>\$ (24.3)</b>	<b>\$ 112.2</b>	<b>\$ 16.8</b>
Other comprehensive income (loss) attributable to noncontrolling interests			
Net (income) loss attributable to noncontrolling interests	0.4	(0.3)	0.5
Foreign currency translation adjustment attributable to noncontrolling interests	2.3	(0.9)	2.2
<b>Comprehensive Income (Loss) Attributable to Stockholders</b>	<b>\$ (21.6)</b>	<b>\$ 111.0</b>	<b>\$ 19.5</b>

See Notes to Consolidated Financial Statements.

**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

	December 31	
	2018	2017
	(In millions, except share data)	
<b>ASSETS</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 83.7	\$ 220.1
Accounts receivable, net of allowances of \$5.4 in 2018 and \$3.7 in 2017	465.5	453.0
Inventories, net	533.6	411.9
Prepaid expenses and other	48.8	46.4
<b>Total Current Assets</b>	<b>1,131.6</b>	<b>1,131.4</b>
<b>Property, Plant and Equipment, Net</b>	<b>296.2</b>	<b>265.4</b>
<b>Intangible Assets</b>	<b>67.7</b>	<b>56.1</b>
<b>Goodwill</b>	<b>108.3</b>	<b>59.1</b>
<b>Deferred Income Taxes</b>	<b>26.3</b>	<b>16.6</b>
<b>Investment in Unconsolidated Affiliates</b>	<b>75.6</b>	<b>81.9</b>
<b>Other Non-current Assets</b>	<b>36.4</b>	<b>37.4</b>
<b>Total Assets</b>	<b>\$ 1,742.1</b>	<b>\$ 1,647.9</b>
<b>LIABILITIES AND EQUITY</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 415.5	\$ 385.8
Accounts payable, affiliates	21.3	18.1
Revolving credit facilities	13.3	6.1
Current maturities of long-term debt	78.1	68.4
Accrued payroll	56.3	51.7
Other current liabilities	191.7	162.3
<b>Total Current Liabilities</b>	<b>776.2</b>	<b>692.4</b>
<b>Long-term Debt</b>	<b>210.1</b>	<b>216.2</b>
<b>Self-insurance Liabilities</b>	<b>25.2</b>	<b>33.5</b>
<b>Pension Obligations</b>	<b>23.1</b>	<b>11.1</b>
<b>Deferred Income Taxes</b>	<b>17.8</b>	<b>13.0</b>
<b>Other Long-term Liabilities</b>	<b>130.2</b>	<b>109.3</b>
<b>Total Liabilities</b>	<b>1,182.6</b>	<b>1,075.5</b>
<b>Stockholders' Equity</b>		
Common stock:		
Class A, par value \$0.01 per share, 12,682,755 shares outstanding (2017 - 12,562,817 shares outstanding)	0.1	0.1
Class B, par value \$0.01 per share, convertible into Class A on a one-for-one basis, 3,877,967 shares outstanding (2017 - 3,899,503 shares outstanding)	0.1	0.1
Capital in excess of par value	321.5	323.8
Treasury stock	(24.1)	(31.5)
Retained earnings	407.3	389.1
Accumulated other comprehensive loss	(177.5)	(116.1)
<b>Total Stockholders' Equity</b>	<b>527.4</b>	<b>565.5</b>
<b>Noncontrolling Interest</b>	<b>32.1</b>	<b>6.9</b>
<b>Total Equity</b>	<b>559.5</b>	<b>572.4</b>
<b>Total Liabilities and Equity</b>	<b>\$ 1,742.1</b>	<b>\$ 1,647.9</b>

See Notes to Consolidated Financial Statements.

**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended December 31		
	2018	2017	2016
	(In millions)		
<b>Operating Activities</b>			
Net income	\$ 34.3	\$ 48.9	\$ 42.3
Adjustments to reconcile net income to net cash provided (used for) by operating activities:			
Depreciation and amortization	44.0	42.8	39.1
Amortization of deferred financing fees	1.7	1.4	1.1
Deferred income taxes	(3.2)	8.1	(7.4)
Gain on sale of assets	(0.3)	(0.3)	(0.3)
Stock-based compensation	5.7	8.8	4.9
Long-lived and intangible assets impairment charge	—	4.9	—
Dividends from unconsolidated affiliates	22.2	2.8	5.1
Other non-current liabilities	(9.4)	4.8	(6.0)
Other	8.8	(13.3)	(15.1)
Working capital changes, excluding the effect of business acquisitions:			
Accounts receivable	58.0	(44.0)	(27.5)
Inventories	(125.4)	(43.6)	(14.9)
Other current assets	1.3	(1.0)	(3.2)
Accounts payable	23.3	125.1	(53.8)
Other liabilities	6.6	19.3	(13.2)
<b>Net cash provided by (used for) operating activities</b>	<b>67.6</b>	<b>164.7</b>	<b>(48.9)</b>
<b>Investing Activities</b>			
Expenditures for property, plant and equipment	(38.8)	(41.0)	(42.7)
Proceeds from the sale of assets	5.9	1.3	13.7
Investments in equity securities	—	(5.6)	—
Business acquisitions, net of cash acquired	(78.0)	(1.0)	(116.1)
Purchase of noncontrolling interest	—	(1.0)	—
<b>Net cash used for investing activities</b>	<b>(110.9)</b>	<b>(47.3)</b>	<b>(145.1)</b>
<b>Financing Activities</b>			
Additions to long-term debt	71.5	265.6	40.1
Reductions of long-term debt	(143.7)	(75.9)	(56.5)
Net additions (reductions) to revolving credit agreements	6.5	(111.7)	115.4
Cash dividends paid	(20.4)	(19.8)	(19.2)
Cash dividends paid to noncontrolling interest	(0.3)	(0.3)	(0.2)
Financing fees paid	(0.6)	(4.7)	(1.7)
Other	(0.6)	(0.1)	—
<b>Net cash provided by (used for) financing activities</b>	<b>(87.6)</b>	<b>53.1</b>	<b>77.9</b>
Effect of exchange rate changes on cash	(5.5)	6.4	4.2
<b>Cash and Cash Equivalents</b>			
Increase (decrease) for the year	(136.4)	176.9	(111.9)
Balance at the beginning of the year	220.1	43.2	155.1
<b>Balance at the end of the year</b>	<b>\$ 83.7</b>	<b>\$ 220.1</b>	<b>\$ 43.2</b>

See Notes to Consolidated Financial Statements.



**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF EQUITY**

	<u>Accumulated Other Comprehensive Income (Loss)</u>											Total Stockholders' Equity	Noncontrolling Interest	Total Equity
	Class A Common Stock	Class B Common Stock	Treasury Stock	Capital in Excess of Par Value	Retained Earnings	Foreign Currency Translation Adjustment	Deferred Gain on AFS Securities	Deferred Gain (Loss) on Cash Flow Hedging	Pension Adjustment					
(In millions)														
Balance, January 1, 2016	\$ 0.1	\$ 0.1	\$ (42.5)	\$ 320.3	\$ 336.7	\$ (90.1)	\$ —	\$ (4.0)	\$ (59.8)	\$ 460.8	\$ 1.9	\$ 462.7		
Stock-based compensation	—	—	—	4.9	—	—	—	—	—	4.9	—	4.9		
Stock issued under stock compensation plans	—	—	5.6	(5.6)	—	—	—	—	—	—	—	—		
Net income (loss)	—	—	—	—	42.8	—	—	—	—	42.8	(0.5)	42.3		
Cash dividends	—	—	—	—	(19.2)	—	—	—	—	(19.2)	(0.2)	(19.4)		
Current period other comprehensive income (loss)	—	—	—	—	—	(1.9)	—	(9.0)	(17.4)	(28.3)	—	(28.3)		
Reclassification adjustment to net income	—	—	—	—	—	—	—	0.8	2.0	2.8	—	2.8		
Acquisition of Bolzoni	—	—	—	—	—	—	—	—	—	—	69.8	69.8		
Purchase of noncontrolling interest	—	—	—	—	—	—	—	—	—	—	(62.2)	(62.2)		
Foreign currency translation on noncontrolling interest	—	—	—	—	—	—	—	—	—	—	(2.2)	(2.2)		
<b>Balance, December 31, 2016</b>	<b>\$ 0.1</b>	<b>\$ 0.1</b>	<b>\$ (36.9)</b>	<b>\$ 319.6</b>	<b>\$ 360.3</b>	<b>\$ (92.0)</b>	<b>\$ —</b>	<b>\$ (12.2)</b>	<b>\$ (75.2)</b>	<b>\$ 463.8</b>	<b>\$ 6.6</b>	<b>\$ 470.4</b>		
Stock-based compensation	—	—	—	8.8	—	—	—	—	—	8.8	—	8.8		
Stock issued under stock compensation plans	—	—	5.4	(5.4)	—	—	—	—	—	—	—	—		
Net income (loss)	—	—	—	—	48.6	—	—	—	—	48.6	0.3	48.9		
Cash dividends	—	—	—	—	(19.8)	—	—	—	—	(19.8)	(0.3)	(20.1)		
Current period other comprehensive income (loss)	—	—	—	—	—	33.5	2.8	6.6	13.1	56.0	—	56.0		
Reclassification adjustment to net income	—	—	—	—	—	—	—	4.1	3.2	7.3	—	7.3		
Acquisition of business	—	—	—	—	—	—	—	—	—	—	0.3	0.3		
Purchase of noncontrolling interest	—	—	—	0.8	—	—	—	—	—	0.8	(0.9)	(0.1)		
Foreign currency translation on noncontrolling interest	—	—	—	—	—	—	—	—	—	—	0.9	0.9		
<b>Balance, December 31, 2017</b>	<b>\$ 0.1</b>	<b>\$ 0.1</b>	<b>\$ (31.5)</b>	<b>\$ 323.8</b>	<b>\$ 389.1</b>	<b>\$ (58.5)</b>	<b>\$ 2.8</b>	<b>\$ (1.5)</b>	<b>\$ (58.9)</b>	<b>\$ 565.5</b>	<b>\$ 6.9</b>	<b>\$ 572.4</b>		

**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF EQUITY**

	<u>Accumulated Other Comprehensive Income (Loss)</u>												
	Class A Common Stock	Class B Common Stock	Treasury Stock	Capital in Excess of Par Value	Retained Earnings	Foreign Currency Translation Adjustment	Deferred Gain on AFS Securities	Deferred Gain (Loss) on Cash Flow Hedging	Pension Adjustment	Total Stockholders' Equity	Noncontrolling Interest	Total Equity	
(In millions)													
Balance, December 31, 2017	\$ 0.1	\$ 0.1	\$ (31.5)	\$ 323.8	\$ 389.1	\$ (58.5)	\$ 2.8	\$ (1.5)	\$ (58.9)	\$ 565.5	\$ 6.9	\$ 572.4	
Cumulative effect of change in accounting	—	—	—	—	3.9	—	(2.8)	—	—	1.1	—	1.1	
Stock-based compensation	—	—	—	5.7	—	—	—	—	—	5.7	—	5.7	
Stock issued under stock compensation plans	—	—	8.0	(8.0)	—	—	—	—	—	—	—	—	
Purchase of treasury stock	—	—	(0.6)	—	—	—	—	—	—	(0.6)	—	(0.6)	
Net income (loss)	—	—	—	—	34.7	—	—	—	—	34.7	(0.4)	34.3	
Cash dividends	—	—	—	—	(20.4)	—	—	—	—	(20.4)	(0.3)	(20.7)	
Current period other comprehensive income (loss)	—	—	—	—	—	(27.4)	—	(12.2)	(20.1)	(59.7)	—	(59.7)	
Reclassification adjustment to net income	—	—	—	—	—	—	—	(1.8)	2.9	1.1	—	1.1	
Acquisition of business	—	—	—	—	—	—	—	—	—	—	28.2	28.2	
Foreign currency translation on noncontrolling interest	—	—	—	—	—	—	—	—	—	—	(2.3)	(2.3)	
Balance, December 31, 2018	<b>\$ 0.1</b>	<b>\$ 0.1</b>	<b>\$ (24.1)</b>	<b>\$ 321.5</b>	<b>\$ 407.3</b>	<b>\$ (85.9)</b>	<b>\$ —</b>	<b>\$ (15.5)</b>	<b>\$ (76.1)</b>	<b>\$ 527.4</b>	<b>\$ 32.1</b>	<b>\$ 559.5</b>	

See Notes to Consolidated Financial Statements.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

**NOTE 1—Principles of Consolidation and Nature of Operations**

The consolidated financial statements include the accounts of Hyster-Yale Materials Handling, Inc., a Delaware corporation, and the accounts of Hyster-Yale's wholly owned domestic and international subsidiaries and majority-owned joint ventures (collectively, "Hyster-Yale" or the "Company"). All intercompany accounts and transactions among the consolidated companies are eliminated in consolidation.

The Company, through its wholly owned operating subsidiary, Hyster-Yale Group, Inc. ("HYG"), designs, engineers, manufactures, sells and services a comprehensive line of lift trucks and aftermarket parts marketed globally primarily under the Hyster<sup>®</sup> and Yale<sup>®</sup> brand names, mainly to independent Hyster<sup>®</sup> and Yale<sup>®</sup> retail dealerships. Lift trucks and component parts are manufactured in the United States, China, Northern Ireland, Mexico, the Netherlands, the Philippines, Italy, Vietnam, Japan and Brazil. The sale of service parts represents approximately 13% of total revenues as reported for each of 2018, 2017 and 2016.

The Company operates Bolzoni S.p.A. ("Bolzoni"). Bolzoni is a leading worldwide producer and distributor of attachments, forks and lift tables marketed under the Bolzoni Auramo<sup>®</sup> and Meyer<sup>®</sup> brand names. Bolzoni products are manufactured in Italy, China, Germany, Finland and the United States. Through the design, production and distribution of a wide range of attachments, Bolzoni has a strong presence in the market niche of lift-truck attachments and industrial material handling.

In 2018, the Company announced, as part of a plan to expand Bolzoni's capabilities in the United States, Bolzoni's North America attachment manufacturing will be moved into HYG's Sulligent, Alabama manufacturing facility over the course of 2019. As a result, effective January 1, 2019, the Sulligent facility became a Bolzoni facility. As of December 31, 2018, the Sulligent facility has been included in the lift truck operations within this Annual Report on Form 10-K. The Company will reclassify the historical results of the Sulligent facility for 2019 reporting beginning with the first quarter 2019 Form 10-Q.

The Company operates Nuvera Fuel Cells, LLC ("Nuvera"). Nuvera is an alternative-power technology company focused on hydrogen fuel-cell stacks and engines.

On June 1, 2018, the Company completed the acquisition of the majority interest in Zhejiang Maximal Forklift Co., Ltd. ("Maximal"). Maximal is a Chinese manufacturer of utility and standard lift trucks and specialized material handling equipment involved in the design, manufacture, service and distribution of Class 1 electric and Class 5 internal combustion engine counterbalance utility and standard platforms, and Class 2 and Class 3 electric warehouse products for both the local China and global markets under the Maximal brand. Maximal also designs and produces specialized products in the port equipment and rough terrain forklift markets. The results of Maximal are included in the JAPIC segment since the date of acquisition.

Investments in Sumitomo NACCO Forklift Co., Ltd. ("SN"), a 50% owned joint venture, and HYG Financial Services, Inc. ("HYGFS"), a 20% owned joint venture, are accounted for by the equity method. SN operates manufacturing facilities in Japan, the Philippines and Vietnam from which the Company purchases certain components, service parts and lift trucks. Sumitomo Heavy Industries, Ltd. owns the remaining 50% interest in SN. Each stockholder of SN is entitled to appoint directors representing 50% of the vote of SN's board of directors. All matters related to policies and programs of operation, manufacturing and sales activities require mutual agreement between the Company and Sumitomo Heavy Industries, Ltd. prior to a vote of SN's board of directors. HYGFS is a joint venture with Wells Fargo Financial Leasing, Inc. ("WF"), formed primarily for the purpose of providing financial services to independent Hyster<sup>®</sup> and Yale<sup>®</sup> lift truck dealers and National Account customers in the United States. National Account customers are large customers with centralized purchasing and geographically dispersed operations in multiple dealer territories. The Company's percentage share of the net income or loss from these equity investments is reported on the line "Income from unconsolidated affiliates" in the "Other income (expense)" portion of the Consolidated Statements of Operations.

**NOTE 2—Significant Accounting Policies**

**Use of Estimates:** The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and judgments. These estimates and judgments affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities (if any) at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

**Cash and Cash Equivalents:** Cash and cash equivalents include cash in banks and highly liquid investments with original maturities of three months or less.

**Accounts Receivable, Net of Allowances:** Allowances are maintained against accounts receivable for doubtful accounts. Allowances for doubtful accounts are maintained for estimated losses resulting from the inability of customers to make required payments. These allowances are based on both recent trends of certain customers estimated to be a greater credit risk as well as general trends of the entire customer pool. Accounts are written off against the allowance when it becomes evident collection will not occur.

**Self-insurance Liabilities:** The Company is generally self-insured for product liability, environmental liability and medical and workers' compensation claims. For product liability, catastrophic insurance coverage is retained for potentially significant individual claims. The Company also has insurance for certain historic product liability claims. An estimated provision for claims reported and for claims incurred but not yet reported under the self-insurance programs is recorded and revised periodically based on industry trends, historical experience and management judgment. In addition, industry trends are considered within management judgment for valuing claims. Changes in assumptions for such matters as legal judgments and settlements, legal defense costs, inflation rates, medical costs and actual experience could cause estimates to change in the near term.

**Advertising Costs:** Advertising costs are expensed as incurred. Total advertising expense was \$14.3 million , \$10.8 million and \$10.8 million in 2018 , 2017 and 2016 , respectively.

**Product Development Costs:** Expenses associated with the development of new products and changes to existing products are charged to expense as incurred. These costs amounted to \$110.9 million , \$104.5 million and \$107.0 million in 2018 , 2017 and 2016 , respectively.

**Foreign Currency:** Assets and liabilities of non-U.S. operations are translated into U.S. dollars at the fiscal year-end exchange rate. The related translation adjustments are recorded as a separate component of equity, except for the Company's Mexican operations. The U.S. dollar is considered the functional currency for the Company's Mexican operations and, therefore, the effect of translating assets and liabilities from the Mexican peso to the U.S. dollar is recorded in results of operations. Revenues and expenses of all non-U.S. operations are translated using average monthly exchange rates prevailing during the year.

**Reclassification:** Certain amounts in the prior period's audited consolidated financial statements have been reclassified to conform to the current period's presentation.

The following table includes other significant accounting policies that are described in other notes to the consolidated financial statements, including the footnote number:

Significant Accounting Policy	Note
Revenue Recognition	Revenue Recognition (Note 3)
Reportable segments	Business Segments (Note 4)
Stock-based compensation	Common Stock and Earnings per Share (Note 6)
Income taxes	Income Taxes (Note 7)
Derivatives and hedging activities	Financial Instruments and Derivative Financial Instruments (Note 9)
Fair value of financial instruments	Financial Instruments and Derivative Financial Instruments (Note 9) and Retirement Benefit Plans (Note 10)
Pension	Retirement Benefit Plans (Note 10)
Inventories	Inventories (Note 11)
Property, plant and equipment	Property, Plant and Equipment, Net (Note 12)
Impairment or disposal of long-lived assets	Property, Plant and Equipment, Net (Note 12)
Goodwill and intangible assets	Goodwill and Intangible Assets (Note 13)
Contingencies	Contingencies (Note 17)

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES***(Tabular Amounts in Millions, Except Per Share and Percentage Data)***Recently Issued Accounting Standards**

The following table provides a brief description of recent accounting pronouncements adopted January 1, 2018. Unless otherwise noted, the adoption of these standards did not have a material effect on the Company's financial position, results of operations, cash flows or related disclosures.

<b>Standard</b>	<b>Description</b>
Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers (Topic 606) (Subsequent ASUs were issued in 2015, 2016 and 2017 to update or clarify this guidance)	The guidance is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration which the entity expects to be entitled in exchange for those goods or services. The new guidance also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and assets recognized from costs incurred to obtain or fulfill a contract. See Note 3 for additional information.
ASU No. 2016-01, Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities	The guidance requires equity investments previously accounted for under the cost method of accounting to be measured at fair value and recognized in net income. In addition, the guidance defines measurement and presentation of financial instruments. The Company recorded a cumulative adjustment to retained earnings for deferred gains related to equity investments in third parties as of January 1, 2018 of \$3.6 million. Subsequent changes in the fair value of these investments are recognized directly in earnings.
ASU No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments	The guidance clarifies the classification of certain types of cash receipts and cash payments. In addition, the guidance provides for the application of the predominance principle when certain cash receipts and payments have aspects of more than one class of cash flows.
ASU No. 2016-16, Income Taxes (Topic 740)	The guidance allows for recognition of current and deferred income taxes for an intra-entity transfer of an asset other than inventory. The guidance allows for more accurate representation of the economics of an intra-entity asset transfer which will require income tax consequences of the transfer, including income taxes payable or paid.
ASU No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash	The guidance requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents.
ASU No. 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business	The guidance clarifies the definition of a business to assist entities in evaluating whether transactions should be accounted for as acquisitions or disposals of businesses.
ASU 2017-05, Other Income – Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20): Clarifying the Scope of Asset Derecognition	The guidance clarifies the scope and accounting of a financial asset that meets the definition of an "in-substance nonfinancial asset" and defines the term, "in-substance nonfinancial asset," in addition to partial sales of nonfinancial assets.
ASU 2017-07, Compensation — Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement	The guidance requires that an employer report the service cost component 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 cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations. As of January 1, 2018, the Company presents the components of net benefit cost, other than service cost, in other (income) expense for its pension plans. Service cost for the Company's pension plans continues to be reported in operating profit. Accordingly, the Company has reclassified \$1.9 million and \$2.0 million of income related to the components of net benefit cost, other than service cost, to other (income) expense for the years ended December 31, 2017 and 2016, respectively, in the Consolidated Statements of Operations.
ASU No. 2018-05, Income Taxes (Topic 740)	The guidance codifies Staff Accounting Bulletin No. 118 regarding the application of US GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Cuts and Jobs Act (the "Tax Reform Act"). See Note 7 for further discussion of the Tax Reform Act.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

The following table provides a brief description of recent accounting pronouncements not yet adopted:

<b>Standard</b>	<b>Description</b>	<b>Required Date of Adoption</b>	<b>Effect on the financial statements or other significant matters</b>
ASU No. 2016-02, Leases (Topic 842)(Subsequent ASUs were issued in 2017 and 2018 to update or clarify this guidance)	The guidance requires lessees (with the exception of short-term leases) to recognize, at the commencement date, a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term.	January 1, 2019	The Company's evaluation process of the new standard includes, but is not limited to, evaluating its current lease portfolio, identifying relevant contracts and attributes affected by the standard and determining the required accounting upon adoption. In addition, the Company is implementing new processes and controls regarding asset financing transactions and financial reporting. The Company has completed the evaluation of its global leasing portfolio and abstraction of key attributes within lease contracts and continues its system-related implementation required for the new standard. The Company will adopt the standard as of January 1, 2019 using the optional transition method that allows for the cumulative effect adjustment to be recorded without restating prior periods. In addition, the Company has completed its evaluation of practical expedients required for adoption, and currently estimates recording a lease obligation in the range of approximately \$75 to \$95 million. The Company anticipates further refinement of this estimate as the systems-related implementation is completed during the first quarter of 2019. In addition, the Company anticipates recognizing an adjustment to increase retained earnings by \$1.0 to \$2.0 million as of January 1, 2019, for certain sales-leaseback transactions for which profit recognition was deferred under previous GAAP but is no longer deferred under the new standard.
ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities	The guidance makes targeted changes to the hedge accounting model intended to facilitate financial reporting that more closely reflects an entity's risk management activities and to simplify the application of hedge accounting. Changes include expanding the types of risk management strategies eligible for hedge accounting, easing the documentation and effectiveness assessment requirements, changing how ineffectiveness is measured and changing the presentation and disclosure requirements for hedge accounting activities.	January 1, 2019	The adoption of the guidance did not have a material effect on the Company's financial position, results of operations, cash flows or related disclosures.
ASU 2018-02, Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income	The guidance provides an election to reclassify the stranded tax effects resulting from the Tax Reform Act from OCI to retained earnings. In addition, the guidance requires new disclosures regarding the election to adopt and the manner in which tax effects remaining in OCI are released.	January 1, 2019	The Company adopted the standard on January 1, 2019 and recorded a cumulative adjustment to retained earnings of \$4.0 million for income tax benefits stranded in OCI resulting from the Tax Reform Act.
ASU 2018-07, Compensation-Stock Compensation (Topic 718)	The guidance addresses the accounting for non-employee share-based payment transactions.	January 1, 2019	The adoption of the guidance did not have a material effect on the Company's financial position, results of operations, cash flows or related disclosures.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

<b>Standard</b>	<b>Description</b>	<b>Required Date of Adoption</b>	<b>Effect on the financial statements or other significant matters</b>
ASU 2018-16, Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes	The guidance permits the use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes under Topic 815 in addition to treasury obligations of the U.S. government, the LIBOR swap rate, the OIS rate based on the Federal Funds Effective Rate, and the Securities Industry and Financial Markets Association Municipal Swap Rate.	January 1, 2019	The adoption of the guidance did not have a material effect on the Company's financial position, results of operations, cash flows or related disclosures.
ASU No. 2016-13, Financial Instruments-Credit Losses (Topic 326)(Subsequent ASUs have been issued in 2018 to update or clarify this guidance)	The guidance eliminates the probable initial recognition threshold and requires an entity to reflect its current estimate of all expected credit losses. The guidance also requires additional disclosures in certain circumstances.	January 1, 2020	The Company is currently evaluating the alternative methods of adoption and the effect on its financial position, results of operations, cash flows and related disclosures.
ASU 2018-17, Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities	The guidance provides that indirect interests held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interests.	January 1, 2020	The Company is currently evaluating the guidance and the effect on its financial position, results of operations, cash flows and related disclosures.
ASU 2018-18, Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606	The guidance clarifies the accounting for collaborative arrangements in conjunction with the adoption of "Revenue from Contracts with Customers (Topic 606)."	January 1, 2020	The Company is currently evaluating the guidance and the effect on its financial position, results of operations, cash flows and related disclosures.
ASU No. 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment	The guidance removes the second step of the two-step test for the measurement of goodwill impairment. The guidance allows for early adoption for impairment testing dates after January 1, 2017.	January 1, 2020	The Company is currently evaluating the timing of adoption and the effect on its current impairment testing process.
ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement	The guidance removes, modifies or adds certain disclosures relating to fair value measurements.	January 1, 2020	The Company is currently evaluating the guidance and the effect on its financial position, results of operations, cash flows and related disclosures.
ASU 2018-15, Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract	The guidance aligns the requirements for capitalizing implementation costs incurred in a hosting agreement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software.	January 1, 2021	The Company is currently evaluating the guidance and the effect on its financial position, results of operations, cash flows and related disclosures.



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

**NOTE 3—Revenue**

**Adoption of the new revenue standard:** On January 1, 2018, the Company adopted Accounting Standards Codification Topic 606, “Revenue from Contracts with Customers” (“new revenue standard”). The new revenue standard was applied to all open revenue contracts using the modified-retrospective method as of January 1, 2018. The Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods. The Company does not expect the impact of the adoption of the new standard to be material to net income on an ongoing basis.

As of January 1, 2018, the cumulative effect on the Company’s Consolidated Balance Sheet for the adoption of the new revenue standard was as follows:

	Balance at December 31, 2017	Adjustments due to New Revenue Standard	Balance at January 1, 2018
Accounts receivable, net	\$ 453.0	\$ 0.5	\$ 453.5
Inventories, net	411.9	(0.3)	411.6
Prepaid expenses and other	46.4	1.1	47.5
Other current liabilities	162.3	1.0	163.3
Retained earnings	389.1	0.3	389.4

In accordance with the adoption of the new revenue standard, the effect of adoption on the December 31, 2018 Consolidated Income Statement and Balance Sheet was as follows:

	YEAR ENDED		
	DECEMBER 31, 2018		
	As Reported	Amount before the new revenue standard	Change Higher/(Lower)
Revenues	\$ 3,174.4	\$ 3,169.9	\$ 4.5
Cost of sales	2,677.3	2,673.2	4.1
Gross profit	497.1	496.7	0.4
Operating profit	38.8	38.4	0.4
Income before income taxes	36.6	36.2	0.4
Income tax provision (benefit)	2.3	2.2	0.1
Net income attributable to stockholders	34.7	34.4	0.3

	DECEMBER 31, 2018		
	As Reported	Amount before the new revenue standard	Change Higher/(Lower)
	Accounts receivable, net	\$ 465.5	\$ 463.6
Inventories, net	533.6	535.3	(1.7)
Prepaid expenses and other	48.8	50.8	(2.0)
Other current liabilities	191.7	194.1	(2.4)
Retained earnings	407.3	406.7	0.6

The Company has elected to apply the practical expedient to reflect the aggregate effect of all modifications when identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price. The Company does not disclose the value of unsatisfied performance obligations for revenue contracts with an original expected length of one year or less.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

**Accounting policy:** Revenue is recognized when obligations under the terms of a contract with the customer are satisfied which occurs when control of the trucks, parts, or services are transferred to the customer. Revenue is measured as the amount of consideration expected to be received in exchange for transferring goods or providing services. The satisfaction of performance obligations under the terms of a revenue contract generally gives rise for the right to payment from the customer. The Company's standard payment terms vary by the type and location of the customer and the products or services offered. Generally, the time between when revenue is recognized and when payment is due is not significant. Given the insignificant days between revenue recognition and receipt of payment, financing components do not exist between the Company and its customers. Taxes collected from customers are excluded from revenue. The estimated costs of product warranties are recognized as expense when the products are sold. See Note 16 for further information on product warranties.

The majority of the Company's sales contracts contain performance obligations satisfied at a point in time when title and risks and rewards of ownership have transferred to the customer. Revenue for service contracts are recognized as the services are provided.

The Company also records variable consideration in the form of estimated reductions to revenues for customer programs and incentive offerings, including special pricing agreements, promotions and other volume-based incentives. Lift truck sales revenue is recorded net of estimated discounts. The estimated discount amount is based upon historical experience and trend analysis for each lift truck model. In addition to standard discounts, dealers can also request additional discounts that allow them to offer price concessions to customers. From time to time, the Company offers special incentives to increase market share or dealer stock and offers certain customers volume rebates if a specified cumulative level of purchases is obtained.

For contracts with customers that include multiple performance obligations, judgment is required to determine whether performance obligations specified in these contracts are distinct and should be accounted for as separate revenue transactions for recognition purposes. For such arrangements, revenue is allocated to each performance obligation based on its relative standalone selling price. Standalone selling prices are generally determined based on the prices charged to customers or using expected cost plus margin. Impairment losses recognized on receivables or contract assets were not significant for the year ended December 31, 2018 .

The Company generally expenses sales commissions when incurred because the amortization period would have been one year or less. These costs are reported on the line "Selling, general and administrative expenses" in the Consolidated Statements of Operations.

The Company pays for shipping and handling activities regardless of when control is transferred and has elected to account for shipping and handling as activities to fulfill the promise to transfer the good, rather than a promised service. These costs are reported on the line "Cost of sales" in the Consolidated Statements of Operations.

The following table disaggregates revenue by category:

	YEAR ENDED						
	DECEMBER 31, 2018						
	Lift truck business			Bolzoni	Nuvera	Elims	Total
Americas	EMEA	JAPIC					
Dealer sales	\$ 1,156.6	\$ 628.1	\$ 203.1	\$ —	\$ —	\$ —	\$ 1,987.8
Direct customer sales	346.7	15.2	—	—	—	—	361.9
Aftermarket sales	370.9	107.4	36.8	—	—	—	515.1
Other	113.3	18.1	2.2	200.9	12.3	(37.2)	309.6
<b>Total Revenues</b>	<b>\$ 1,987.5</b>	<b>\$ 768.8</b>	<b>\$ 242.1</b>	<b>\$ 200.9</b>	<b>\$ 12.3</b>	<b>\$ (37.2)</b>	<b>\$ 3,174.4</b>

Dealer sales are recognized when the Company transfers control based on the shipping terms of the contract, which is generally when the truck is shipped from the manufacturing facility to the dealers. The majority of direct customer sales are to National Account customers. In these transactions, the Company transfers control and recognizes revenue when it delivers the product to the customer according to the terms of the contract. Aftermarket sales represent parts sales, extended warranty and maintenance services. For the sale of aftermarket parts, the Company transfers control and recognizes revenue when parts are shipped to the customer. When customers are given the right to return eligible parts and accessories, the Company estimates the expected

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returns based on an analysis of historical experience. The Company adjusts estimated revenues at the earlier of when the most likely amount of consideration expected to be received changes or when the consideration becomes fixed. The Company recognizes revenue for extended warranty and maintenance agreements based on the standalone selling price over the life of the contract, which reflects the costs to perform under these contracts and corresponds with, and thereby depicts, the transfer of control to the customer. Bolzoni revenue is primarily the sale of attachments to customers. In these transactions, the Company transfers control and recognizes revenue according to the shipping terms of the contract. Nuvera's revenues are primarily the sale of battery box replacement ("BBR") units to HYG for sale to a dealer. In all revenue transactions, the Company receives cash equal to the invoice price and amount of consideration received and the revenue recognized may vary with changes in marketing incentives.

During the fourth quarter of 2018, Nuvera recognized revenue which had previously been deferred related to BBR units due to the inability to estimate total future warranty costs. The BBRs are new technology and the design of the product continues to evolve. The Company determined sufficient data was available in the fourth quarter of 2018 to reasonably estimate the future costs related to the sale of BBR units, including warranty costs, which were also recorded during the fourth quarter of 2018.

**Deferred Revenue:** The Company defers revenue for transactions that have not met the criteria for recognition at the time payment is collected, including extended warranties and maintenance contracts. In addition, for certain products, services and customer types, the Company collects payment prior to the transfer of control to the customer.

	<b>Deferred Revenue</b>	
Balance, December 31, 2017	\$	51.6
Customer deposits and billings		63.0
Revenue recognized		(52.8)
Balance, December 31, 2018	\$	61.8

**NOTE 4—Business Segments**

The Company's reportable segments for the lift truck business include the following three management units: the Americas, EMEA and JAPIC. Americas includes operations in the United States, Canada, Mexico, Brazil, Latin America and its corporate headquarters. EMEA includes operations in Europe, the Middle East and Africa. JAPIC includes operations in the Asia and Pacific regions including China, as well as the equity earnings of SN operations. On June 1, 2018, the Company completed the acquisition of the majority interest in Maximal, which is also included in the JAPIC segment from the date of acquisition. Certain amounts are allocated to these geographic management units and are included in the segment results presented below, including product development costs, corporate headquarter's expenses and certain information technology infrastructure costs. These allocations among geographic management units are determined by senior management and not directly incurred by the geographic operations. In addition, other costs are incurred directly by these geographic management units based upon the location of the manufacturing plant or sales units, including manufacturing variances, product liability, warranty and sales discounts, which may not be associated with the geographic management unit of the ultimate end user sales location where revenues and margins are reported. Therefore, the reported results of each segment for the lift truck business cannot be considered stand-alone entities as all segments are inter-related and integrate into a single global lift truck business.

The Company reports the results of both Bolzoni and Nuvera as separate segments. Intercompany sales between Nuvera, Bolzoni and the lift truck business have been eliminated.

In 2018, the Company announced, as part of a plan to expand Bolzoni's capabilities in the United States, Bolzoni's North America attachment manufacturing will be moved into the Company's Sulligent, Alabama manufacturing facility over the course of 2019. As a result, effective January 1, 2019, the Sulligent facility became a Bolzoni facility. As of December 31, 2018, the Sulligent facility has been included in the lift truck operations within this Annual Report on Form 10-K. The Company will reclassify the historical results of the Sulligent facility for 2019 reporting beginning with the first quarter 2019 Form 10-Q.

Financial information for each of the reportable segments is presented in the following table. See Note 1 for a discussion of the Company's product lines. Refer to Note 2 for a description of the accounting policies of the reportable segments as well as a reference table for the remaining accounting policies described in the accompanying footnotes.

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	2018	2017	2016
<b>Revenues from external customers</b>			
Americas	\$ 1,987.5	\$ 1,834.1	\$ 1,675.7
EMEA	768.8	715.8	615.7
JAPIC	242.1	173.9	169.5
Lift truck business	2,998.4	2,723.8	2,460.9
Bolzoni	200.9	177.2	115.6
Nuvera	12.3	3.7	2.5
Eliminations	(37.2)	(19.5)	(9.3)
Total	\$ 3,174.4	\$ 2,885.2	\$ 2,569.7
<b>Gross profit (loss)</b>			
Americas	\$ 314.3	\$ 334.6	\$ 287.9
EMEA	102.8	95.7	89.5
JAPIC	22.1	20.2	17.1
Lift truck business	439.2	450.5	394.5
Bolzoni	63.7	54.8	35.7
Nuvera	(5.9)	(2.1)	(2.7)
Eliminations	0.1	(0.6)	—
Total	\$ 497.1	\$ 502.6	\$ 427.5
<b>Selling, general and administrative expenses</b>			
Americas	\$ 238.9	\$ 225.0	\$ 214.0
EMEA	96.2	88.9	84.1
JAPIC	36.6	26.3	23.8
Lift truck business	371.7	340.2	321.9
Bolzoni	54.2	48.4	35.8
Nuvera	32.4	39.9	36.9
Total	\$ 458.3	\$ 428.5	\$ 394.6
<b>Operating profit (loss)</b>			
Americas	\$ 75.4	\$ 109.6	\$ 73.9
EMEA	6.6	6.8	5.4
JAPIC	(14.5)	(6.1)	(6.7)
Lift truck business	67.5	110.3	72.6
Bolzoni	9.5	6.4	(0.1)
Nuvera	(38.3)	(42.0)	(39.6)
Eliminations	0.1	(0.6)	—
Total	\$ 38.8	\$ 74.1	\$ 32.9

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	2018	2017	2016
<b>Interest expense</b>			
Americas	\$ 12.4	\$ 12.3	\$ 5.4
EMEA	3.1	1.6	0.4
JAPIC	(0.1)	—	0.1
Lift truck business	15.4	13.9	5.9
Bolzoni	0.8	0.8	0.8
Nuvera	0.1	—	—
Eliminations	(0.3)	(0.1)	—
Total	\$ 16.0	\$ 14.6	\$ 6.7
<b>Interest income</b>			
Americas	\$ (2.2)	\$ (3.3)	\$ (1.0)
EMEA	(0.1)	—	(0.5)
JAPIC	(0.3)	(0.4)	(0.5)
Lift truck business	(2.6)	(3.7)	(2.0)
Bolzoni	—	—	—
Nuvera	—	—	—
Eliminations	0.2	0.1	—
Total	\$ (2.4)	\$ (3.6)	\$ (2.0)
<b>Other (income) expense</b>			
Americas	\$ (3.8)	\$ (25.1)	\$ (5.5)
EMEA	(3.4)	(1.1)	(1.2)
JAPIC	(4.5)	(4.5)	(3.2)
Lift truck business	(11.7)	(30.7)	(9.9)
Bolzoni	0.3	—	(0.2)
Nuvera	—	—	—
Total	\$ (11.4)	\$ (30.7)	\$ (10.1)
<b>Income tax provision (benefit)</b>			
Americas	\$ 15.5	\$ 57.3	\$ 15.4
EMEA	0.8	0.9	(2.7)
JAPIC	(5.7)	1.2	(0.5)
Lift truck business	10.6	59.4	12.2
Bolzoni	2.1	1.0	(0.4)
Nuvera	(10.5)	(15.3)	(15.8)
Eliminations	0.1	(0.2)	—
Total	\$ 2.3	\$ 44.9	\$ (4.0)

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	2018	2017	2016
<b>Net income (loss) attributable to stockholders</b>			
Americas	\$ 53.5	\$ 68.4	\$ 59.6
EMEA	6.3	5.3	9.4
JAPIC	(3.1)	(1.9)	(2.1)
Lift truck business	56.7	71.8	66.9
Bolzoni	5.8	3.9	(0.3)
Nuvera	(27.9)	(26.7)	(23.8)
Eliminations	0.1	(0.4)	—
Total	<u>\$ 34.7</u>	<u>\$ 48.6</u>	<u>\$ 42.8</u>
<b>Total assets</b>			
Americas	\$ 1,259.4	\$ 1,146.0	\$ 831.9
EMEA	720.7	615.5	462.3
JAPIC	315.6	138.6	127.0
Eliminations	(578.7)	(304.6)	(185.3)
Lift truck business	1,717.0	1,595.5	1,235.9
Bolzoni	231.8	239.8	206.9
Nuvera	39.6	26.4	36.9
Eliminations	(246.3)	(213.8)	(192.6)
Total	<u>\$ 1,742.1</u>	<u>\$ 1,647.9</u>	<u>\$ 1,287.1</u>
<b>Depreciation and amortization</b>			
Americas	\$ 20.9	\$ 19.9	\$ 18.5
EMEA	7.4	7.1	6.5
JAPIC	5.2	2.6	3.1
Lift truck business	33.5	29.6	28.1
Bolzoni	9.7	11.2	9.5
Nuvera	0.8	2.0	1.5
Total	<u>\$ 44.0</u>	<u>\$ 42.8</u>	<u>\$ 39.1</u>
<b>Capital expenditures</b>			
Americas	\$ 20.9	\$ 25.5	\$ 27.6
EMEA	7.3	8.6	7.3
JAPIC	3.6	1.2	1.6
Lift truck business	31.8	35.3	36.5
Bolzoni	4.2	4.7	4.0
Nuvera	2.8	1.0	2.2
Total	<u>\$ 38.8</u>	<u>\$ 41.0</u>	<u>\$ 42.7</u>
<b>Cash and cash equivalents</b>			
Americas	\$ 19.5	\$ 191.2	\$ 10.4
EMEA	31.6	11.6	14.4
JAPIC	17.2	6.6	8.2
Lift truck business	68.3	209.4	33.0
Bolzoni	15.4	10.7	10.2
Nuvera	—	—	—
Total	<u>\$ 83.7</u>	<u>\$ 220.1</u>	<u>\$ 43.2</u>

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**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**
*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*
**Data by Geographic Region**

No single country outside of the United States comprised 10% or more of revenues from unaffiliated customers. The “Other” category below includes Canada, Mexico, South America and the Asia and Pacific regions. In addition, no single customer comprised 10% or more of revenues from unaffiliated customers.

	United States	Europe, Africa and Middle East	Other	Consolidated
<b>2018</b>				
<b>Revenues from unaffiliated customers, based on the customers' location</b>	<b>\$ 1,650.3</b>	<b>\$ 940.5</b>	<b>\$ 583.6</b>	<b>\$ 3,174.4</b>
<b>Long-lived tangible assets</b>	<b>\$ 180.9</b>	<b>\$ 72.6</b>	<b>\$ 118.3</b>	<b>\$ 371.8</b>
<b>2017</b>				
Revenues from unaffiliated customers, based on the customers' location	\$ 1,588.8	\$ 825.8	\$ 470.6	\$ 2,885.2
Long-lived tangible assets	\$ 181.6	\$ 82.3	\$ 83.4	\$ 347.3
<b>2016</b>				
Revenues from unaffiliated customers, based on the customers' location	\$ 1,437.6	\$ 701.9	\$ 430.2	\$ 2,569.7
Long-lived tangible assets	\$ 159.1	\$ 59.8	\$ 82.1	\$ 301.0

**NOTE 5—Quarterly Results of Operations (Unaudited)**

A summary of the unaudited results of operations for the year ended December 31 is as follows:

	<b>2018</b>			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
<b>Revenues</b>	<b>\$ 788.2</b>	<b>\$ 765.6</b>	<b>\$ 782.9</b>	<b>\$ 837.7</b>
<b>Gross profit</b>	<b>\$ 132.1</b>	<b>\$ 126.2</b>	<b>\$ 117.9</b>	<b>\$ 120.9</b>
<b>Operating profit (loss)</b>	<b>\$ 19.2</b>	<b>\$ 10.8</b>	<b>\$ 12.2</b>	<b>\$ (3.4)</b>
<b>Net income (loss)</b>	<b>\$ 14.9</b>	<b>\$ 5.7</b>	<b>\$ 14.9</b>	<b>\$ (1.2)</b>
<b>Net income (loss) attributable to stockholders</b>	<b>\$ 14.9</b>	<b>\$ 5.6</b>	<b>\$ 15.4</b>	<b>\$ (1.2)</b>
<b>Basic earnings (loss) per share</b>	<b>\$ 0.90</b>	<b>\$ 0.34</b>	<b>\$ 0.93</b>	<b>\$ (0.07)</b>
<b>Diluted earnings (loss) per share</b>	<b>\$ 0.90</b>	<b>\$ 0.34</b>	<b>\$ 0.93</b>	<b>\$ (0.07)</b>
<b>2017</b>				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	\$ 713.1	\$ 685.5	\$ 691.1	\$ 795.5
Gross profit	\$ 126.1	\$ 121.7	\$ 121.4	\$ 133.4
Operating profit	\$ 22.6	\$ 17.5	\$ 18.1	\$ 15.9
Net income (loss)	\$ 18.1	\$ 16.4	\$ 16.7	\$ (2.3)
Net income (loss) attributable to stockholders	\$ 18.1	\$ 16.4	\$ 16.5	\$ (2.4)
<b>Basic earnings (loss) per share</b>	<b>\$ 1.10</b>	<b>\$ 1.00</b>	<b>\$ 1.00</b>	<b>\$ (0.15)</b>
<b>Diluted earnings (loss) per share</b>	<b>\$ 1.10</b>	<b>\$ 0.99</b>	<b>\$ 1.00</b>	<b>\$ (0.15)</b>

Net income (loss) attributable to stockholders for the fourth quarter of 2017 include the impacts of the Tax Reform Act, which was signed into law December 22, 2017. See Note 7 to the consolidated financial statements for further discussion.



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**NOTE 6—Common Stock and Earnings per Share**

The Company's Class A common stock is traded on the New York Stock Exchange under the ticker symbol "HY." Because of transfer restrictions on Class B common stock, no trading market has developed, or is expected to develop, for the Company's Class B common stock. The Class B common stock is convertible into Class A common stock on a one-for-one basis at any time at the request of the holder. The Company's Class A common stock and Class B common stock have the same cash dividend rights per share. The Class A common stock has one vote per share and the Class B common stock has ten votes per share. The total number of authorized shares of Class A common stock and Class B common stock at December 31, 2018 was 125 million shares and 35 million shares, respectively. Treasury shares of Class A common stock totaling 327,385 and 425,787 at December 31, 2018 and 2017, respectively, have been deducted from shares outstanding.

**Stock Compensation:** The Company has stock compensation plans for certain employees in the U.S. that allow the grant of shares of Class A common stock, subject to restrictions, as a means of retaining and rewarding them for long-term performance and to increase ownership in the Company. Shares awarded under the plans are fully vested and entitle the stockholder to all rights of common stock ownership except that shares may not be assigned, pledged or otherwise transferred during the restriction period. In general, the restriction period ends at the earliest of (i) five years after the participant's retirement date, (ii) ten years from the award date, or (iii) the participant's death or permanent disability. Pursuant to the plans, the Company issued 88,172, 89,502 and 56,002 shares related to the years ended December 31, 2018, 2017 and 2016, respectively. After the issuance of these shares, there were 319,718 shares of Class A common stock available for issuance under these plans. Compensation expense related to these share awards was \$4.5 million (\$3.6 million net of tax), \$7.6 million (\$6.0 million net of tax) and \$3.8 million (\$2.3 million net of tax) for the years ended December 31, 2018, 2017 and 2016, respectively. Compensation expense at the grant date represents fair value based on the market price of the shares of Class A common stock. The Company also has a stock compensation plan for non-employee directors of the Company under which a portion of the non-employee directors' annual retainer is paid in restricted shares of Class A common stock. For the years ended December 31, 2018, \$113,000 of each non-employee director's retainer of \$173,000 was paid in restricted shares of Class A common stock. For the year ended December 31, 2017, \$110,000 of \$166,000 was paid in restricted shares of Class A common stock. For the year ended December 31, 2016, \$102,000 of \$158,000 was paid in restricted shares of Class A common stock. Shares awarded under the plan are fully vested and entitle the stockholder to all rights of common stock ownership except that shares may not be assigned, pledged or otherwise transferred during the restriction period. In general, the restriction period ends at the earliest of (i) ten years from the award date, (ii) the date of the director's death or permanent disability, (iii) five years (or earlier with the approval of the Board of Directors) after the director's date of retirement from the Board of Directors, or (iv) the date on which the director has both retired from the Board of Directors and reached 70 years of age. Pursuant to this plan, the Company issued 16,196, 14,480 and 15,426 shares related to the years ended December 31, 2018, 2017 and 2016, respectively. In addition to the mandatory retainer fee received in restricted stock, directors may elect to receive shares of Class A common stock in lieu of cash for up to 100% of the balance of their annual retainer, meeting attendance fees, committee retainer and any committee chairman's fees. These voluntary shares are not subject to any restrictions. Total shares issued under voluntary elections were 2,182, 2,006 and 2,352 in 2018, 2017 and 2016, respectively. After the issuance of these shares, there were 8,739 shares of Class A common stock available for issuance under this directors' plan. Compensation expense related to these awards was \$1.2 million (\$0.9 million net of tax), \$1.2 million (\$0.9 million net of tax) and \$1.1 million (\$0.7 million net of tax) for the years ended December 31, 2018, 2017 and 2016, respectively. Compensation expense at the grant date represents fair value based on the market price of the shares of Class A common stock.

**Earnings per Share:** For purposes of calculating earnings per share, no adjustments have been made to the reported amounts of net income attributable to stockholders. In addition, basic and diluted earnings per share for Class A common stock are the same as Class B common stock. The weighted average number of shares of Class A common stock and Class B common stock outstanding used to calculate basic and diluted earnings per share were as follows:

	2018	2017	2016
Basic weighted average shares outstanding	16.540	16.447	16.376
Dilutive effect of restricted stock awards	0.062	0.067	0.051
Diluted weighted average shares outstanding	16.602	16.514	16.427
Basic earnings per share	\$ 2.10	\$ 2.95	\$ 2.61
Diluted earnings per share	\$ 2.09	\$ 2.94	\$ 2.61
Cash dividends per share	\$ 1.2325	\$ 1.2025	\$ 1.1700

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**NOTE 7—Income Taxes**

The components of income before income taxes and provision for income taxes for the years ended December 31 are as follows:

	2018	2017	2016
<b>Income (loss) before income taxes</b>			
U.S.	\$ (7.5)	\$ 48.3	\$ (1.2)
Non-U.S.	44.1	45.5	39.5
	<u>\$ 36.6</u>	<u>\$ 93.8</u>	<u>\$ 38.3</u>
<b>Income tax provision (benefit)</b>			
Current tax provision (benefit):			
Federal	\$ (4.2)	\$ 28.3	\$ (1.3)
State	0.8	1.4	(0.3)
Non-U.S.	8.9	7.1	5.0
Total current	<u>\$ 5.5</u>	<u>\$ 36.8</u>	<u>\$ 3.4</u>
Deferred tax provision (benefit):			
Federal	\$ (2.6)	\$ 10.7	\$ (5.8)
State	0.3	(0.7)	0.8
Non-U.S.	(0.9)	(1.9)	(2.4)
Total deferred	<u>\$ (3.2)</u>	<u>\$ 8.1</u>	<u>\$ (7.4)</u>
	<u>\$ 2.3</u>	<u>\$ 44.9</u>	<u>\$ (4.0)</u>

The Company made income tax payments of \$16.8 million, \$14.0 million and \$19.3 million during 2018, 2017 and 2016, respectively. The Company received income tax refunds of \$0.8 million, \$2.2 million and \$11.1 million during 2018, 2017 and 2016, respectively.

A reconciliation of the federal statutory and reported income tax rate for the year ended December 31 is as follows:

	2018	2017	2016
<b>Income before income taxes</b>	<u>\$ 36.6</u>	<u>\$ 93.8</u>	<u>\$ 38.3</u>
Statutory taxes (21% in 2018 and 35% in 2017 and 2016)	\$ 7.7	\$ 32.8	\$ 13.4
Tax Reform Act	(4.4)	38.2	—
Federal income tax credits	(3.7)	(1.8)	(1.8)
Equity interest earnings	(1.7)	(8.1)	(2.2)
Non-U.S. rate differences	(1.5)	(7.2)	(9.6)
Tax controversy resolution	(0.4)	—	2.1
State income taxes	—	0.2	(0.6)
Valuation allowance	3.0	0.1	(0.2)
Global intangible low-taxed income	1.2	—	—
Sale of non-U.S. investment	—	(9.1)	(1.9)
Unremitted non-U.S. earnings	—	(0.4)	(3.9)
Nondeductible compensation	0.9	0.1	0.1
Capitalized acquisition costs	0.9	—	1.6
Other	0.3	0.1	(1.0)
Income tax provision (benefit)	<u>\$ 2.3</u>	<u>\$ 44.9</u>	<u>\$ (4.0)</u>
Reported income tax rate	<u>6.3%</u>	<u>47.9%</u>	<u>n.m.</u>

n.m. - not meaningful

On December 22, 2017, the President of the United States signed into law the Tax Reform Act. The Tax Reform Act significantly revised the U.S. corporate income tax regime by, among other things, lowering the U.S. corporate income tax rate

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from 35% to 21% effective January 1, 2018, repealing the deduction for domestic production activities, allowing the immediate expensing of certain qualified capital expenditures, implementing a territorial tax system and imposing a one-time transition tax on certain unremitted earnings of non-U.S. subsidiaries. As a result of the Tax Reform Act in 2017, the Company recorded provisional tax effects of \$38.2 million, comprised of \$33.1 million of tax expense due to the transition tax on the unremitted earnings and profits of non-U.S. subsidiaries and \$5.1 million of tax expense due to the effects on the Company's deferred tax assets and liabilities as of December 31, 2017. The Company has since finalized its calculation of earnings and profits, including the amounts held in cash or other specified assets and its calculation of available foreign tax credits consistent with the additional regulatory guidance issued during 2018, resulting in a reduction in tax expense of \$4.4 million, which was recorded during 2018.

After the utilization of existing tax credits, the Company will pay cash taxes, including state income taxes, of \$17.6 million with respect to the transition tax payable over an installment period of eight years. As a result of the Tax Reform Act, no additional income taxes or withholding taxes have been provided for any undistributed foreign earnings, nor any additional outside basis differences inherent in these entities, as these amounts continue to be indefinitely reinvested in non-U.S. operations.

While the Tax Reform Act provides for a territorial system, beginning in 2018, it includes new anti-deferral and anti-base erosion provisions, the global intangible low-taxed income ("GILTI") provisions and the base-erosion and anti-abuse tax ("BEAT") provisions.

The GILTI provisions require the Company to include non-U.S. earnings in excess of an allowable return on the Company's non-U.S. subsidiary's tangible assets in its U.S. income tax return. The Company has provisioned for GILTI due to expense allocations required by the U.S. foreign tax credit rules and various adjustments required to determine tangible assets as defined in the Tax Reform Act. The Company has elected to account for GILTI tax in the period in which it is incurred, and therefore has not provided any deferred tax amounts for GILTI.

The BEAT provisions in the Tax Reform Act create a minimum tax where a lower tax rate is applied to pre-tax income determined without the benefit of certain base-erosion payments made to related non-U.S. corporations. The Company will only be taxed under this regime if such tax exceeds the regular U.S. corporate income tax. The Company did not incur a BEAT liability in 2018.

During 2017, the Company recognized a tax benefit of \$9.1 million and tax expense of \$1.4 million for unrecognized tax benefits, from an internal sale of a subsidiary between consolidated companies resulting in the repatriation of non-U.S. accumulated earnings taxed at higher rates. In addition, the Company settled various federal obligations in Brazil through the utilization of its federal net operating loss carryforwards for which a valuation allowance was previously provided. As a result of the utilization of the underlying deferred tax assets, the Company released the associated valuation allowance previously provided of \$4.7 million. This was partly offset by a \$1.6 million valuation allowance provided against deferred tax assets in China where the Company has determined that such deferred tax assets no longer meet the more likely than not standard for realization.

During 2016, the Company received a notice from the Italian Tax Authority approving the transfer of certain tax losses as part of an internal restructuring. As a result, the Company determined it was more likely than not that the deferred tax asset for such losses of approximately \$3.2 million would be realized in the foreseeable future, and released the valuation allowance previously provided.

Other items during 2016 include a tax benefit of \$4.0 million. As a result of the Bolzoni acquisition, the Company changed its previous reinvestment assertion; and consequently, all of the earnings of its European operations are now considered permanently reinvested and the previously provided deferred tax liability is no longer required. In addition, the Company recognized tax expense of \$1.6 million related to non-deductible acquisition expenses and tax expense of \$2.1 million for net additions for unrecognized tax benefits.

The Company continually evaluates its deferred tax assets to determine if a valuation allowance is required. A valuation allowance is required where realization is determined to no longer meet the "more likely than not" standard. The Company provided \$1.8 million, \$2.7 million and \$2.4 million in 2018, 2017 and 2016, respectively, of valuation allowances related to

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pre-tax losses in Brazil, \$0.8 million and \$0.6 million in 2018 and 2017 due to pre-tax losses in China and \$0.4 million in 2018 related to Non-U.S. capital losses in its effective tax rate.

A detailed summary of the total deferred tax assets and liabilities in the Consolidated Balance Sheets resulting from differences in the book and tax basis of assets and liabilities follows:

	December 31	
	2018	2017
<b>Deferred tax assets</b>		
Tax attribute carryforwards	\$ 28.6	\$ 28.3
Accrued expenses and reserves	15.1	8.3
Product warranties	9.9	9.1
Accrued product liability	5.6	6.5
Other employee benefits	4.3	3.2
Accrued pension benefits	4.6	2.2
Other	2.3	—
Total deferred tax assets	70.4	57.6
Less: Valuation allowance	30.9	31.0
	39.5	26.6
<b>Deferred tax liabilities</b>		
Depreciation and amortization	28.0	22.2
Inventories	3.0	0.5
Other	—	0.3
Total deferred tax liabilities	31.0	23.0
Net deferred tax asset	\$ 8.5	\$ 3.6

The following table summarizes the tax carryforwards and associated carryforward periods and related valuation allowances where the Company has determined that realization is uncertain:

	December 31, 2018		
	Net deferred tax asset	Valuation allowance	Carryforwards expire during:
Non-U.S. net operating loss	\$ 21.2	\$ 15.6	2019 - Indefinite
Non-U.S. capital losses	6.4	6.4	2019 - Indefinite
State net operating losses and credits	4.1	3.3	2019 - 2037
Less: Unrecognized tax benefits	(3.1)	—	
Total	\$ 28.6	\$ 25.3	
	December 31, 2017		
	Net deferred tax asset	Valuation allowance	Carryforwards expire during:
Non-U.S. net operating loss	\$ 21.9	\$ 13.9	2018 - Indefinite
Non-U.S. capital losses	6.5	6.5	2018 - Indefinite
State net operating losses and credits	3.8	2.4	2018 - 2036
Less: Unrecognized tax benefits	(3.9)	—	
Total	\$ 28.3	\$ 22.8	

The establishment of a valuation allowance does not have an impact on cash, nor does such an allowance preclude the Company from using its loss carryforwards or other deferred tax assets in future periods. The tax net operating losses

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attributable to Brazil and Australia comprise a substantial portion of the non-U.S. net operating loss deferred tax assets and do not expire under local law.

During 2018 and 2017, the net valuation allowance provided against certain deferred tax assets decreased by \$0.1 million and increased by \$1.7 million, respectively. The change in the total valuation allowance in 2018 and 2017 included a net increase in tax expense of \$3.0 million and \$0.1 million, respectively, a net change in the overall U.S. dollar value of valuation allowances previously recorded in non-U.S. currencies recorded directly in equity of a net decrease of \$3.1 million and a net increase of \$1.1 million in 2018 and 2017, respectively. Additionally in 2017, the change in valuation allowance included a net increase of \$0.5 million due to the remeasurement of deferred taxes as a result of the Tax Reform Act.

Based upon a review of historical earnings and trends, forecasted earnings and the relevant expiration of carryforwards, the Company believes the valuation allowances provided are appropriate. At December 31, 2018, the Company had gross net operating loss carryforwards in U.S. state jurisdictions of \$14.1 million and non-U.S. jurisdictions of \$72.5 million.

The following is a reconciliation of total gross unrecognized tax benefits, defined as the aggregate tax effect of differences between tax return positions and the benefits recognized in the consolidated financial statements for the years ended December 31, 2018, 2017 and 2016. Approximately \$15.1 million, \$10.9 million and \$11.1 million of these amounts as of December 31, 2018, 2017 and 2016, respectively, relate to permanent items that, if recognized, would impact the reported income tax rate. This amount differs from gross unrecognized tax benefits presented in the table below due to the increase in U.S. federal income taxes which would occur upon the recognition of the state tax benefits included herein.

	2018	2017	2016
Balance at January 1	\$ 10.9	\$ 11.2	\$ 3.8
Additions (reductions) for business acquisitions	6.0	(1.0)	6.3
Additions based on tax positions related to the current year	0.4	2.7	2.8
Additions (reductions) for tax positions of prior years	0.3	(1.5)	0.1
Reductions due to settlements with taxing authorities and the lapse of the applicable statute of limitations	(1.6)	(1.2)	(0.9)
Other changes in unrecognized tax benefits including foreign currency translation adjustments	(0.8)	0.7	(0.9)
<b>Balance at December 31</b>	<b>\$ 15.2</b>	<b>\$ 10.9</b>	<b>\$ 11.2</b>

The Company records interest and penalties on uncertain tax positions as a component of the income tax provision. The Company recorded a net increase of \$0.5 million and \$0.1 million during 2018 and 2016, and a net decrease of \$0.1 million during 2017 in interest and penalties. In addition, during 2018 and 2016, the balance of accrued interest and penalty was increased for uncertain tax positions related to business acquisitions by \$7.7 million and \$0.5 million, respectively. During 2018, the total amount of interest and penalty was decreased by \$0.5 million as a result of foreign currency translation into U.S. dollars. The total amount of interest and penalties accrued was \$8.5 million, \$0.8 million and \$0.9 million as of December 31, 2018, 2017 and 2016, respectively.

The Company expects the amount of unrecognized tax benefits will change within the next twelve months. It is reasonably possible the Company will record unrecognized tax benefits within the next twelve months in the range of zero to \$2.0 million resulting from the possible expiration of certain statutes of limitation and settlement of audits. If recognized, the previously unrecognized tax benefits will be recorded as discrete tax benefits in the interim period in which the items are effectively settled.

The tax returns of the Company and its non-U.S. subsidiaries are routinely examined by various taxing authorities. The Company has not been informed of any material assessment for which an accrual has not been previously provided and the Company would vigorously contest any material assessment. Management believes any potential adjustment would not materially affect the Company's financial condition or results of operations.

In general, the Company operates in taxing jurisdictions that provide a statute of limitations period ranging from three to five years for the taxing authorities to review the applicable tax filings. The examination of U.S. federal tax returns for all years prior to 2015 have been settled with the Internal Revenue Service or otherwise have essentially closed under the applicable statute of limitations. However, the Company has elected to voluntarily extend the statute of limitations for U.S. federal tax return for 2012 at the request of its prior parent company such that attributes may be adjusted in limited circumstances. The

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Company is routinely under examination in various state and non-U.S. jurisdictions and in most cases the statute of limitations has not been extended. The Company believes these examinations are routine in nature and are not expected to result in any material tax assessments.

**NOTE 8—Reclassifications from OCI**

The following table summarizes reclassifications out of accumulated other comprehensive income (loss) ("OCI") for each year ended December 31 as recorded in the Consolidated Statements of Operations:

Details about OCI Components	Amount Reclassified from OCI			Affected Line Item in the Statement Where Net Income Is Presented
	2018	2017	2016	
<b>Gain (loss) on cash flow hedges:</b>				
Foreign exchange contracts	\$ 2.6	\$ (5.7)	\$ (3.0)	Cost of sales
Total before tax	2.6	(5.7)	(3.0)	Income before income taxes
Tax expense (benefit)	(0.8)	1.6	2.2	Income tax provision (benefit)
Net of tax	\$ 1.8	\$ (4.1)	\$ (0.8)	Net income
<b>Amortization of defined benefit pension items:</b>				
Actuarial loss	\$ (3.8)	\$ (4.5)	\$ (3.0)	Other, net
Prior service credit	0.2	0.3	0.3	Other, net
Total before tax	(3.6)	(4.2)	(2.7)	Income before income taxes
Tax expense	0.7	1.0	0.7	Income tax provision (benefit)
Net of tax	\$ (2.9)	\$ (3.2)	\$ (2.0)	Net income
<b>Total reclassifications for the period</b>	<b>\$ (1.1)</b>	<b>\$ (7.3)</b>	<b>\$ (2.8)</b>	

**NOTE 9—Financial Instruments and Derivative Financial Instruments**

The carrying amounts of cash and cash equivalents, accounts receivable and accounts payable approximate fair value due to the short-term maturities of these instruments. The fair values of revolving credit agreements and long-term debt, excluding capital leases, were determined using current rates offered for similar obligations taking into account company credit risk. This valuation methodology is Level 2 as defined in the fair value hierarchy. At December 31, 2018, the total carrying value and total fair value of revolving credit agreements and long-term debt, excluding capital leases, was \$284.2 million and \$281.0 million, respectively. At December 31, 2017, the total carrying value and total fair value of revolving credit agreements and long-term debt, excluding capital leases, was \$270.9 million and \$272.2 million, respectively.

Financial instruments that potentially subject the Company to concentration of credit risk consist principally of accounts receivable and derivatives. The large number of customers comprising the Company's customer base and their dispersion across many different industries and geographies mitigates concentration of credit risk on accounts receivable. To further reduce credit risk associated with accounts receivable, the Company performs periodic credit evaluations of its customers, but does not generally require advance payments or collateral. The Company enters into derivative contracts with high-quality financial institutions and limits the amount of credit exposure to any one institution.

**Derivative Financial Instruments**

Financial instruments held by the Company include cash and cash equivalents, accounts receivable, accounts payable, revolving credit agreements, long-term debt, interest rate swap agreements and forward foreign currency exchange contracts. The Company does not hold or issue financial instruments or derivative financial instruments for trading purposes.

The Company uses forward foreign currency exchange contracts to partially reduce risks related to transactions denominated in foreign currencies. These contracts hedge firm commitments and forecasted transactions relating to cash flows associated with sales and purchases denominated in non-functional currencies. The Company offsets fair value amounts related to foreign currency exchange contracts executed with the same counterparty. Changes in the fair value of forward foreign currency exchange contracts that are effective as hedges are recorded in OCI. Deferred gains or losses are reclassified from OCI to the Consolidated Statements of Operations in the same period as the gains or losses from the underlying transactions are recorded

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and are generally recognized in cost of sales. The ineffective portion of derivatives that are classified as hedges is immediately recognized in earnings and is also generally recognized in cost of sales.

The Company periodically enters into foreign currency exchange contracts that do not meet the criteria for hedge accounting. These derivatives are used to reduce the Company's exposure to foreign currency risk related to forecasted purchase or sales transactions or forecasted intercompany cash payments or settlements. Gains and losses on these derivatives are generally recognized in cost of sales.

During 2017, the Company entered into cross-currency swaps which hedge the variability of expected future cash flows that are attributable to foreign currency risk of certain intercompany loans. These agreements include initial and final exchanges of principal and associated interest payments from fixed euro denominated to fixed U.S.-denominated amounts. Changes in the fair value of cross-currency swaps that are effective as hedges are recorded in OCI. Deferred gains or losses are reclassified from OCI to the Consolidated Statements of Operations in the same period as the gains or losses from the underlying transactions are recorded and are generally recognized in other (income) expense and interest expense. The ineffective portion of derivatives that are classified as hedges is immediately recognized in earnings and is generally recognized in other (income) expense.

The Company uses interest rate swap agreements to partially reduce risks related to floating rate financing agreements that are subject to changes in the market rate of interest. Terms of the interest rate swap agreements require the Company to receive a variable interest rate and pay a fixed interest rate. The Company's interest rate swap agreements and its variable rate financings are predominately based upon the one or three-month LIBOR. Changes in the fair value of interest rate swap agreements that are effective as hedges are recorded in OCI. Deferred gains or losses are reclassified from OCI to the Consolidated Statements of Operations in the same period as the gains or losses from the underlying transactions are recorded and are generally recognized in interest expense. The ineffective portion of derivatives that are classified as hedges is immediately recognized in earnings in other (income) expense.

Cash flows from hedging activities are reported in the Consolidated Statements of Cash Flows in the same classification as the hedged item, generally as a component of cash flows from operations.

The Company measures its derivatives at fair value on a recurring basis using significant observable inputs. This valuation methodology is Level 2 as defined in the fair value hierarchy. The Company uses a present value technique that incorporates yield curves and foreign currency spot rates to value its derivatives and also incorporates the effect of the Company's and its counterparties' credit risk into the valuation.

The Company does not currently hold any nonderivative instruments designated as hedges or any derivatives designated as fair value hedges.

**Foreign Currency Derivatives:** The Company held forward foreign currency exchange contracts with a total notional amount of \$1.1 billion at December 31, 2018, primarily denominated in euros, U.S. dollars, Japanese yen, British pounds, Swedish kroner, Mexican pesos, Chinese Renminbi, Brazilian Real and Australian dollars. The Company held forward foreign currency exchange contracts with total notional amounts of \$860.2 million at December 31, 2017, primarily denominated in euros, U.S. dollars, Japanese yen, British pounds, Swedish kroner, Mexican pesos and Australian dollars. The fair value of these contracts approximated a net liability of \$19.5 million and \$2.1 million at December 31, 2018 and 2017, respectively.

For the years ended December 31, 2018 and 2017, there was no material ineffectiveness of forward foreign currency exchange contracts that qualify for hedge accounting. Forward foreign currency exchange contracts that qualify for hedge accounting are generally used to hedge transactions expected to occur within the next 36 months. The mark-to-market effect of forward foreign currency exchange contracts that are considered effective as hedges has been included in OCI. Based on market valuations at December 31, 2018, \$5.0 million of the amount of net deferred loss included in OCI at December 31, 2018 is expected to be reclassified as expense into the Consolidated Statements of Operations over the next twelve months, as the transactions occur.



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**Interest Rate Derivatives:** The Company holds certain contracts that hedge interest payments on the Term Loan borrowings and one and three-month LIBOR borrowings. The following table summarizes the notional amounts, related rates, excluding spreads, and remaining terms of interest rate swap agreements at December 31, 2018 and 2017 :

Notional Amount		Average Fixed Rate		Term at December 31, 2018
December 31	December 31	December 31	December 31	
2018	2017	2018	2017	
\$ 56.5	\$ 56.5	1.94%	1.94%	Extending to November 2022
83.5	83.5	2.20%	2.20%	Extending to May 2023
—	100.0	—%	1.47%	Extending to December 2018

The fair value of all interest rate swap agreements was a net asset of \$1.6 million and \$0.8 million at December 31, 2018 and 2017, respectively. The mark-to-market effect of interest rate swap agreements that are considered effective as hedges has been included in OCI. Based on market valuations at December 31, 2018, \$0.5 million of the amount included in OCI is expected to be reclassified as income in the Consolidated Statement of Operations over the next twelve months, as cash flow payments are made in accordance with the interest rate swap agreements.

The following table summarizes the fair value of derivative instruments at December 31 as recorded in the Consolidated Balance Sheets:

	Asset Derivatives			Liability Derivatives		
	Balance sheet location	2018	2017	Balance sheet location	2018	2017
<b>Derivatives designated as hedging instruments</b>						
Cash Flow Hedges						
Interest rate swap agreements						
Current	Prepaid expenses and other	\$ 0.6	\$ —	Prepaid expenses and other	\$ —	\$ 0.1
Long-term	Other non-current assets	1.0	0.7	Other non-current assets	—	—
	Other long-term liabilities	—	—	Other long-term liabilities	—	0.1
Foreign currency exchange contracts						
Current	Prepaid expenses and other	2.1	8.3	Prepaid expenses and other	0.4	4.0
	Other current liabilities	3.3	2.8	Other current liabilities	12.8	4.3
Long-Term	Other non-current assets	1.0	3.9	Other non-current assets	0.6	1.3
	Other long-term liabilities	0.5	0.5	Other long-term liabilities	13.8	7.7
Total derivatives designated as hedging instruments		\$ 8.5	\$ 16.2		\$ 27.6	\$ 17.5
<b>Derivatives not designated as hedging instruments</b>						
Cash Flow Hedges						
Interest rate swap agreements						
Current	Prepaid expenses and other	\$ —	\$ 0.4	Prepaid expenses and other	\$ —	\$ —
Long-term	Other long-term liabilities	—	—	Other long-term liabilities	—	0.1
Foreign currency exchange contracts						
Current	Prepaid expenses and other	0.4	0.8	Prepaid expenses and other	0.2	0.4
	Other current liabilities	1.5	0.1	Other current liabilities	0.5	0.8
Total derivatives not designated as hedging instruments		\$ 1.9	\$ 1.3		\$ 0.7	\$ 1.3
<b>Total derivatives</b>		\$ 10.4	\$ 17.5		\$ 28.3	\$ 18.8



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The following table summarizes the offsetting of the fair value of derivative instruments on a gross basis by counterparty at December 31, 2018 and 2017 as recorded in the Consolidated Balance Sheets:

	Derivative Assets as of December 31, 2018				Derivative Liabilities as of December 31, 2018			
	Gross Amounts of Recognized Assets	Gross Amounts Offset	Net Amounts Presented	Net Amount	Gross Amounts of Recognized Liabilities	Gross Amounts Offset	Net Amounts Presented	Net Amount
<b>Cash Flow Hedges</b>								
Interest rate swap agreements	\$ 1.6	\$ —	\$ 1.6	\$ 1.6	\$ —	\$ —	\$ —	\$ —
Foreign currency exchange contracts	2.3	(2.3)	—	—	21.8	(2.3)	19.5	19.5
<b>Total derivatives</b>	<b>\$ 3.9</b>	<b>\$ (2.3)</b>	<b>\$ 1.6</b>	<b>\$ 1.6</b>	<b>\$ 21.8</b>	<b>\$ (2.3)</b>	<b>\$ 19.5</b>	<b>\$ 19.5</b>

  

	Derivative Assets as of December 31, 2017				Derivative Liabilities as of December 31, 2017			
	Gross Amounts of Recognized Assets	Gross Amounts Offset	Net Amounts Presented	Net Amount	Gross Amounts of Recognized Liabilities	Gross Amounts Offset	Net Amounts Presented	Net Amount
<b>Cash Flow Hedges</b>								
Interest rate swap agreements	\$ 1.0	\$ (0.2)	\$ 0.8	\$ 0.8	\$ 0.2	\$ (0.2)	\$ —	\$ —
Foreign currency exchange contracts	7.3	(7.3)	—	—	9.4	(7.3)	2.1	2.1
<b>Total derivatives</b>	<b>\$ 8.3</b>	<b>\$ (7.5)</b>	<b>\$ 0.8</b>	<b>\$ 0.8</b>	<b>\$ 9.6</b>	<b>\$ (7.5)</b>	<b>\$ 2.1</b>	<b>\$ 2.1</b>

The following table summarizes the pre-tax impact of derivative instruments for each year ended December 31 as recorded in the Consolidated Statements of Operations:

Derivatives in Cash Flow Hedging Relationships	Amount of Gain or (Loss) Recognized in OCI on Derivative (Effective Portion)			Location of Gain or (Loss) Reclassified from OCI into Income (Effective Portion)	Amount of Gain or (Loss) Reclassified from OCI into Income (Effective Portion)			Location of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion and Amount Excluded from Effectiveness Testing)	Amount of Gain or (Loss) Recognized in Income on Derivative (Ineffective Portion and Amount Excluded from Effectiveness Testing)		
	2018	2017	2016		2018	2017	2016		2018	2017	2016
<b>Cash Flow Hedges</b>											
Interest rate swap agreements	\$ 2.0	\$ 0.5	\$ —	Interest expense	\$ —	\$ —	\$ —	Other	\$ —	\$ —	\$ —
Foreign currency exchange contracts	(18.8)	14.1	(15.5)	Cost of sales	2.6	(5.7)	(3.0)	Cost of sales	—	(0.1)	(0.2)
	<b>\$ (16.8)</b>	<b>\$ 14.6</b>	<b>\$ (15.5)</b>		<b>\$ 2.6</b>	<b>\$ (5.7)</b>	<b>\$ (3.0)</b>		<b>\$ —</b>	<b>\$ (0.1)</b>	<b>\$ (0.2)</b>

  

Derivatives Not Designated as Hedging Instruments	Location of Gain or (Loss) Recognized in Income on Derivative			Amount of Gain or (Loss) Recognized in Income on Derivative			
	2018	2017	2016	2018	2017	2016	
<b>Cash flow hedges</b>							
Interest rate swap agreements				Other	\$ 0.3	\$ 0.2	\$ (0.6)
Foreign currency exchange contracts				Cost of sales	(2.3)	2.0	(2.8)
<b>Total</b>					<b>\$ (2.0)</b>	<b>\$ 2.2</b>	<b>\$ (3.4)</b>

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**NOTE 10—Retirement Benefit Plans**

**Defined Benefit Plans:** The Company maintains various defined benefit pension plans that provide benefits based on years of service and average compensation during certain periods. The Company’s policy is to make contributions to fund these plans within the range allowed by applicable regulations. Plan assets consist primarily of publicly traded stocks and government and corporate bonds.

Pension benefits for employees covered under the Company’s U.S. and U.K. plans are frozen. Only certain grandfathered employees in the Netherlands still earn retirement benefits under defined benefit pension plans. All other eligible employees of the Company, including employees whose pension benefits are frozen, receive retirement benefits under defined contribution retirement plans.

During 2018, 2017 and 2016, the Company recognized a settlement loss of \$1.1 million , \$1.0 million and \$0.9 million , respectively, resulting from lump-sum distributions exceeding the total projected interest cost for the plan year for its U.S. pension plans.

The assumptions used in accounting for the defined benefit plans were as follows for the years ended December 31 :

	2018	2017	2016
<b>United States Plans</b>			
Weighted average discount rates	<b>4.10%</b>	3.40%	3.75%
Expected long-term rate of return on assets	<b>7.50%</b>	7.50%	7.50%
<b>Non-U.S. Plans</b>			
Weighted average discount rates	<b>1.13%-2.65%</b>	0.88% - 2.40%	0.86% - 2.50%
Rate of increase in compensation levels	<b>1.50%-2.50%</b>	1.50% - 2.50%	1.50% - 2.50%
Expected long-term rate of return on assets	<b>1.80%-7.00%</b>	1.70% - 7.00%	3.00% - 7.00%

Each year, the assumptions used to calculate the benefit obligation are used to calculate the net periodic pension expense for the following year.

Set forth below is a detail of the net periodic pension expense for the defined benefit plans for the years ended December 31 :

	2018	2017	2016
<b>United States Plans</b>			
Interest cost	\$ <b>2.5</b>	\$ 2.7	\$ 3.0
Expected return on plan assets	<b>(4.9)</b>	(4.9)	(5.0)
Amortization of actuarial loss	<b>1.8</b>	1.8	1.6
Amortization of prior service credit	<b>(0.2)</b>	(0.3)	(0.3)
Settlements	<b>1.1</b>	1.0	0.9
Net periodic pension expense (benefit)	<u>\$ <b>0.3</b></u>	<u>\$ 0.3</u>	<u>\$ 0.2</u>
<b>Non-U.S. Plans</b>			
Service cost	\$ <b>0.2</b>	\$ 0.2	\$ 0.2
Interest cost	<b>4.0</b>	4.1	5.0
Expected return on plan assets	<b>(10.5)</b>	(9.2)	(8.8)
Amortization of actuarial loss	<b>2.0</b>	2.7	1.4
Net periodic pension expense (benefit)	<u>\$ <b>(4.3)</b></u>	<u>\$ (2.2)</u>	<u>\$ (2.2)</u>

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Set forth below is a detail of other changes in plan assets and benefit obligations recognized in other comprehensive income (loss) for the year ended December 31 :

	2018	2017	2016
<b>United States Plans</b>			
Current year actuarial (gain) loss	\$ 4.8	\$ (2.0)	\$ 1.6
Amortization of actuarial loss	(1.8)	(1.8)	(1.6)
Amortization of prior service credit	0.2	0.3	0.3
Settlements	(1.1)	(1.0)	(0.9)
Total recognized in other comprehensive income (loss)	<u>\$ 2.1</u>	<u>\$ (4.5)</u>	<u>\$ (0.6)</u>
<b>Non-U.S. Plans</b>			
Current year actuarial (gain) loss	\$ 18.8	\$ (13.8)	\$ 20.5
Current year prior service cost	1.9	—	—
Amortization of actuarial loss	(2.0)	(2.7)	(1.4)
Total recognized in other comprehensive income (loss)	<u>\$ 18.7</u>	<u>\$ (16.5)</u>	<u>\$ 19.1</u>

The following table sets forth the changes in the benefit obligation and the plan assets during the year and the funded status of the defined benefit plans at December 31 :

	2018		2017	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
<b>Change in benefit obligation</b>				
Projected benefit obligation at beginning of year	\$ 74.8	\$ 179.0	\$ 75.7	\$ 165.2
Service cost	—	0.2	—	0.2
Interest cost	2.5	4.0	2.7	4.1
Actuarial (gain) loss	(3.9)	(2.9)	2.9	(1.9)
Benefits paid	(4.4)	(6.4)	(4.5)	(5.8)
Employee contributions	—	0.2	—	0.1
Plan amendments	—	2.0	—	—
Lump sum payments	(2.2)	—	(2.0)	—
Foreign currency exchange rate changes	—	(9.7)	—	17.1
Projected benefit obligation at end of year	<u>\$ 66.8</u>	<u>\$ 166.4</u>	<u>\$ 74.8</u>	<u>\$ 179.0</u>
<b>Accumulated benefit obligation at end of year</b>	<u>\$ 66.8</u>	<u>\$ 165.8</u>	<u>\$ 74.8</u>	<u>\$ 178.4</u>
<b>Change in plan assets</b>				
Fair value of plan assets at beginning of year	\$ 71.0	\$ 178.3	\$ 67.2	\$ 138.9
Actual return on plan assets	(3.7)	(12.0)	9.8	20.6
Employer contributions	—	0.8	0.5	9.2
Employee contributions	—	0.2	—	0.1
Benefits paid	(4.4)	(6.4)	(4.5)	(5.8)
Settlements	(2.2)	—	(2.0)	—
Foreign currency exchange rate changes	—	(8.6)	—	15.3
Fair value of plan assets at end of year	<u>\$ 60.7</u>	<u>\$ 152.3</u>	<u>\$ 71.0</u>	<u>\$ 178.3</u>
<b>Funded status at end of year</b>	<u>\$ (6.1)</u>	<u>\$ (14.1)</u>	<u>\$ (3.8)</u>	<u>\$ (0.7)</u>

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	2018		2017	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
<b>Amounts recognized in the consolidated balance sheets consist of:</b>				
Noncurrent assets	\$ —	\$ —	\$ 0.1	\$ 3.8
Noncurrent liabilities	(6.1)	(14.1)	(3.9)	(4.5)
	<u>\$ (6.1)</u>	<u>\$ (14.1)</u>	<u>\$ (3.8)</u>	<u>\$ (0.7)</u>
<b>Components of accumulated other comprehensive income (loss) consist of:</b>				
Actuarial loss	\$ 39.7	\$ 56.9	\$ 37.9	\$ 40.1
Prior service cost (credit)	—	1.8	(0.3)	(0.1)
Deferred taxes	(8.3)	(8.0)	(7.8)	(5.2)
Change in statutory tax rate	(6.0)	(2.0)	(6.0)	(2.0)
Foreign currency translation adjustment	—	2.0	—	2.3
	<u>\$ 25.4</u>	<u>\$ 50.7</u>	<u>\$ 23.8</u>	<u>\$ 35.1</u>

The projected benefit obligation included in the table above represents the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated future pay increases. The accumulated benefit obligation also reflects the actuarial present value of benefits attributable to employee service rendered to date, but does not include the effects of estimated future pay increases.

Expected amortization of amounts included in accumulated other comprehensive income (loss) to be recognized in net periodic benefit cost in 2019 are:

	Amount		Net of tax	
Actuarial loss	\$	3.9	\$	3.1
Prior service cost	\$	0.1	\$	0.1

The Company expects to contribute \$0.8 million to its non-U.S. pension plans in 2019. The Company does not expect to contribute to its U.S. pension plans in 2019.

Pension benefit payments are made from assets of the pension plans. Future pension benefit payments expected to be paid from assets of the pension plans are:

	U.S. Plans	Non-U.S. Plans
2019	\$ 6.1	\$ 6.2
2020	5.9	6.2
2021	5.7	6.2
2022	5.6	6.4
2023	5.4	6.8
2024 - 2028	22.7	38.4
	<u>\$ 51.4</u>	<u>\$ 70.2</u>

The expected long-term rate of return on defined benefit plan assets reflects management's expectations of long-term rates of return on funds invested to provide for benefits included in the projected benefit obligations. The Company has established the expected long-term rate of return assumption for plan assets by considering the historical rates of return over a period of time that is consistent with the long-term nature of the underlying obligations of these plans as well as a forward-looking rate of return. The historical and forward-looking rates of return for each of the asset classes used to determine the Company's estimated rate of return assumption were based upon the rates of return earned or expected to be earned by investments in the equivalent benchmark market indices for each of the asset classes.

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Expected returns for most of the Company's pension plans are based on a calculated market-related value of assets. Under this methodology, asset gains and losses resulting from actual returns that differ from the Company's expected returns are recognized in the market-related value of assets ratably over three years.

The pension plans maintain an investment policy that, among other things, establishes a portfolio asset allocation methodology with percentage allocation bands for individual asset classes. The investment policy provides that investments are reallocated between asset classes as balances exceed or fall below the appropriate allocation bands.

The following is the actual allocation percentage and target allocation percentage for the Company's U.S. pension plan assets at December 31:

	2018 Actual Allocation	2017 Actual Allocation	Target Allocation Range
U.S. equity securities	43.7%	44.8%	36% - 54%
Non-U.S. equity securities	19.0%	20.0%	16% - 24%
Fixed income securities	36.4%	33.9%	30% - 40%
Money market	0.9%	1.3%	0% - 10%

The following is the actual allocation percentage and target allocation percentage for the Company's U.K. pension plan assets at December 31 :

	2018 Actual Allocation	2017 Actual Allocation	Target Allocation
U.K. equity securities	20.9%	20.2%	21%
Non-U.K. equity securities	48.0%	49.3%	49%
Fixed income securities	30.4%	27.7%	30%
Money market	0.7%	2.8%	—%

The Company maintains a pension plan for certain employees in the Netherlands which has purchased annuity contracts to meet its obligations.

The defined benefit pension plans do not have any direct ownership of Hyster-Yale common stock.

The fair value of each major category of U.S. plan assets for the Company's pension plans are valued using quoted market prices in active markets for identical assets, or Level 1 in the fair value hierarchy. The fair value of each major category of Non-U.S. plan assets for the Company's pension plans are valued using observable inputs, either directly or indirectly, other than quoted market prices in active markets for identical assets, or Level 2 in the fair value hierarchy.

Following are the values as of December 31 :

	Level 1		Level 2	
	2018	2017	2018	2017
U.S. equity securities	\$ 26.5	\$ 31.8	\$ 21.2	\$ 26.1
U.K. equity securities	—	—	28.8	32.8
Non-U.S., non-U.K. equity securities	11.6	14.2	44.8	54.0
Fixed income securities	22.1	24.1	56.5	60.9
Money market	0.5	0.9	1.0	4.5
Total	<u>\$ 60.7</u>	<u>\$ 71.0</u>	<u>\$ 152.3</u>	<u>\$ 178.3</u>

**Defined Contribution Plans:** The Company has defined contribution (401(k)) plans for substantially all U.S. employees and similar plans for employees outside of the United States. The Company generally matches employee contributions based on plan provisions. In addition, the Company has defined contribution retirement plans whereby the contribution to participants is determined annually based on a formula that includes the effect of actual compared with targeted operating results and the age

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and compensation of the participants. Total costs, including Company contributions, for these plans were \$26.5 million , \$24.3 million and \$21.2 million in 2018 , 2017 and 2016 , respectively.

**NOTE 11—Inventories**

Inventories are stated at the lower of cost or market for last-in, first-out (“LIFO”) inventory or lower of cost or net realizable value for first-in, first-out (“FIFO”) inventory. At December 31, 2018 and 2017 , 51% and 49% , respectively, of total inventories were determined using the LIFO method, which consists primarily of manufactured inventories, including service parts, in the United States. The FIFO method is used with respect to all other inventories.

The cost components of inventory include raw materials, purchased components, direct and indirect labor, utilities, depreciation, inbound freight charges, purchasing and receiving costs, inspection costs and warehousing costs. Reserves are maintained for estimated obsolescence or excess inventory equal to the difference between the cost of inventory and the net realizable value based upon assumptions about future demand and market conditions. Upon a subsequent sale or disposal of the impaired inventory, the corresponding reserve for impaired value is relieved to ensure that the cost basis of the inventory reflects any write-downs.

Inventories are summarized as follows:

	December 31	
	2018	2017
Finished goods and service parts	\$ 248.6	\$ 193.7
Work in process	30.0	19.9
Raw materials	307.0	239.0
Total manufactured inventories	585.6	452.6
LIFO reserve	(52.0)	(40.7)
Total inventory	\$ 533.6	\$ 411.9

**NOTE 12—Property, Plant and Equipment, Net**

Property, plant and equipment are recorded at cost. Depreciation and amortization are provided in amounts sufficient to amortize the cost of the assets, including assets recorded under capital leases, over their estimated useful lives using the straight-line method. Buildings are generally depreciated using a 20, 40 or 50-year life, improvements to land and buildings are depreciated over estimated useful lives ranging up to 40 years and equipment is depreciated over estimated useful lives ranging from three to 15 years. Capital grants received for the acquisition of equipment are recorded as reductions of the related equipment cost and reduce future depreciation expense. Repairs and maintenance costs are expensed when incurred.

The Company periodically evaluates long-lived assets, including intangible assets with finite lives, for impairment when changes in circumstances or the occurrence of certain events indicate the carrying amount of an asset may not be recoverable. Upon identification of indicators of impairment, assets and liabilities are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets or liabilities. The asset group would be considered impaired when the estimated future undiscounted cash flows generated by the asset group are less than carrying value. If the carrying value of an asset group is considered impaired, an impairment charge is recorded for the amount that the carrying value of the asset group exceeds its fair value. Fair value is estimated as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

During the fourth quarter of 2017, in connection with the preparation of the Company's annual operating plan for 2018 and longer-term forecast, the Company identified indicators of impairment at Nuvera due to the extension of time expected to commercialize Nuvera's products and the related length of time needed to achieve break-even operating results and positive cash flows. Accordingly, the Company performed an impairment analysis during the fourth quarter of 2017 of Nuvera's long-lived assets, including property, plant and equipment and intangible assets with finite lives. Based on this analysis, it was determined that the fair value of these assets was less than the respective carrying amounts of such assets, and accordingly, the Company recognized an impairment charge of \$4.9 million in the Nuvera segment, which is included in selling, general and administrative expenses in the consolidated statement of operations. The impairment charge reduced property, plant, and equipment by \$3.7 million and intangible assets by \$1.2 million . The estimated fair value of intangible assets with finite lives

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was determined using a relief from royalty method and property, plant and equipment was determined using a cost approach. These valuation methods use Level 3 inputs under the fair value hierarchy.

Property, plant and equipment, net includes the following:

	December 31	
	2018	2017
Land and land improvements	\$ 32.9	\$ 27.4
Plant and equipment	740.0	700.4
Property, plant and equipment, at cost	772.9	727.8
Allowances for depreciation and amortization	(476.7)	(462.4)
	\$ 296.2	\$ 265.4

Total depreciation and amortization expense on property, plant and equipment was \$37.4 million, \$37.4 million and \$34.5 million during 2018, 2017, and 2016, respectively.

**NOTE 13—Goodwill and Intangible Assets**

The Company evaluates the carrying amount of goodwill and indefinite-lived intangible assets for impairment annually as of May 1<sup>st</sup> and between annual evaluations if changes in circumstances or the occurrence of certain events indicate potential impairment. The Company uses either a qualitative or quantitative analysis to determine whether fair value exceeds carrying value. Goodwill impairment testing for 2018 was performed using a quantitative analysis for each reporting unit. As part of the quantitative testing process for goodwill, the Company estimated fair values using a discounted cash flow approach from the perspective of a market participant. Significant estimates in the discounted cash flow approach are cash flow forecasts of the reporting units, the discount rate, the terminal business value and the projected income tax rate. The cash flow forecasts of the reporting units are based upon management's long-term view of markets and are the forecasts that are used by senior management and the Board of Directors to evaluate operating performance. The discount rate utilized is management's estimate of what the market's weighted average cost of capital is for a company with a similar debt rating and stock volatility, as measured by beta. The projected income tax rates utilized are the statutory tax rates for the countries where each reporting unit operates. The terminal business value is determined by applying a business growth factor to the latest year for which a forecast exists. As part of the goodwill quantitative testing process, the Company evaluates whether there are reasonably likely changes to management's estimates that would have a material impact on the results of the goodwill impairment testing.

The annual testing of goodwill for impairment was conducted as of May 1, 2018. The fair value of each reporting unit was in excess of its carrying value and thus, no impairment exists.

The indefinite-lived intangible assets are the Bolzoni trademarks. Fair values used in testing for potential impairment of the trademarks are calculated by applying an estimated market value royalty rate to the forecasted revenues of the businesses that utilize those assets. The assumed cash flows from this calculation are discounted using Bolzoni's weighted average cost of capital. The annual testing of indefinite-lived intangibles for impairment was conducted as of May 1, 2018. The fair value of the indefinite-lived intangible assets was in excess of its carrying value and thus, no impairment exists.

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The following table summarizes intangible assets, other than goodwill, recorded in the consolidated balance sheets:

December 31, 2018	Gross Carrying Amount	Accumulated Amortization	Net Balance
<b>Intangible assets not subject to amortization</b>			
Trademarks	\$ 17.2	\$ —	\$ 17.2
<b>Intangible assets subject to amortization</b>			
Customer and contractual relationships	39.5	(10.0)	29.5
Patents and technology	20.9	(4.9)	16.0
Trademarks	5.4	(0.4)	5.0
<b>Total</b>	<b>\$ 83.0</b>	<b>\$ (15.3)</b>	<b>\$ 67.7</b>
December 31, 2017	Gross Carrying Amount	Accumulated Amortization	Net Balance
<b>Intangible assets not subject to amortization</b>			
Trademarks	\$ 18.0	\$ —	\$ 18.0
<b>Intangible assets subject to amortization</b>			
Customer and contractual relationships	\$ 30.5	\$ (6.4)	\$ 24.1
Patents and technology	16.5	(3.1)	13.4
Trademarks	0.6	—	0.6
<b>Total</b>	<b>\$ 65.6</b>	<b>\$ (9.5)</b>	<b>\$ 56.1</b>

As further described in Note 12, in 2017 the Company recognized a \$1.2 million impairment charge for Nuvera consisting of \$0.8 million and \$0.4 million for patents and technology and trademarks, respectively.

Amortization expense for intangible assets, which is recognized on a straight-line basis over the estimated useful life of the related asset, was \$6.6 million and \$5.7 million in 2018 and 2017, respectively. Expected annual amortization expense of other intangible assets, based upon December 31, 2018 U.S. dollar values, for the next five years is as follows: \$6.0 million in 2019, \$5.9 million in 2020, \$4.8 million in 2021, \$4.3 million in 2022 and \$4.2 million in 2023. The weighted-average amortization period for intangible assets is as follows:

Intangible assets subject to amortization	Weighted-Average Useful Lives (Years)
Customer relationships	13
Engineering drawings	8
Non-compete agreement	1
Patents	7
Trademarks	19

The following table summarizes goodwill by segment as of December 31, 2018 and 2017:

	Carrying Amount of Goodwill				
	Americas	EMEA	JAPIC	Bolzoni	Total
Balance at January 1, 2017	\$ 1.7	\$ —	\$ —	\$ 49.0	\$ 50.7
Additions	—	0.8	—	1.0	1.8
Foreign currency translation	—	—	—	6.6	6.6
Balance at December 31, 2017	\$ 1.7	\$ 0.8	\$ —	\$ 56.6	\$ 59.1
Additions	—	0.3	55.1	—	55.4
Foreign currency translation	—	—	(3.6)	(2.6)	(6.2)
<b>Balance at December 31, 2018</b>	<b>\$ 1.7</b>	<b>\$ 1.1</b>	<b>\$ 51.5</b>	<b>\$ 54.0</b>	<b>\$ 108.3</b>



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**NOTE 14—Current and Long-Term Financing**

The following table summarizes available and outstanding borrowings:

	December 31	
	2018	2017
Total outstanding borrowings:		
Revolving credit agreements	\$ 13.3	\$ 6.1
Term loan, net	181.3	190.9
Other debt	89.6	73.9
Capital lease obligations	17.3	19.8
Total debt outstanding	\$ 301.5	\$ 290.7
Plus: discount on term loan and unamortized deferred financing fees	3.7	4.1
Total debt outstanding, gross	\$ 305.2	\$ 294.8
Current portion of borrowings outstanding	\$ 91.4	\$ 74.5
Long-term portion of borrowings outstanding	\$ 210.1	\$ 216.2
Total available borrowings, net of limitations, under revolving credit agreements	\$ 217.5	\$ 218.8
Unused revolving credit agreements	\$ 204.2	\$ 212.7
Weighted average stated interest rate on total borrowings	5.0%	5.2%
Weighted average effective interest rate on total borrowings (including interest rate swap agreements)	4.0%	3.9%

Annual maturities of total debt, excluding capital leases, are as follows:

2019	\$ 85.6
2020	26.8
2021	14.7
2022	15.6
2023	145.2
Thereafter	—
	\$ 287.9

Interest paid on total debt was \$15.0 million , \$13.6 million and \$5.6 million during 2018 , 2017 and 2016 , respectively.

The Company has a \$200.0 million secured, floating-rate revolving credit facility (the "Facility") that expires in April 2022. There were \$10.0 million of borrowings outstanding under the Facility at December 31, 2018 . The availability under the Facility, at December 31, 2018 , was \$185.9 million , which reflects reductions of \$4.1 million for letters of credit and other restrictions. The Facility consists of a U.S. revolving credit facility in the amount of \$120.0 million and a non-U.S. revolving credit facility of \$80.0 million. The Facility can be increased up to \$300.0 million, subject to limits in the Term Loan (defined below), over the term of the agreement in minimum increments of \$10.0 million subject to certain conditions. The obligations under the Facility are generally secured by a lien on the working capital assets of the borrowers in the Facility, which include but are not limited to, cash and cash equivalents, accounts receivable and inventory and a second lien on the Term Loan Collateral (defined below). The approximate book value of assets held as collateral under the Facility was \$950 million as of December 31, 2018 .

Borrowings bear interest at a floating rate based on a base rate or LIBOR, as defined in the Facility, plus an applicable margin. The applicable margins, as of December 31, 2018 , for U.S. base rate loans and LIBOR loans were 0.25% and 1.25% , respectively. The applicable margins, as of December 31, 2018 , for non-U.S. base rate loans and LIBOR loans was 1.25% . The applicable LIBOR interest rates under the Facility on December 31, 2018 were 2.44% and 1.25% , respectively, for the U.S. and non-U.S. facility including the applicable floating rate margin. The Facility also required the payment of a fee of 0.350% per annum on the unused commitment as of December 31, 2018 .

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The Facility includes restrictive covenants, which, among other things, limit additional borrowings and investments of the Company and its subsidiaries subject to certain thresholds, as defined in the Facility, and limits the payment of dividends. If availability for both total and U.S. revolving credit facilities on a pro forma basis, is greater than fifteen percent and less than or equal to twenty percent, the Company may pay dividends subject to achieving a minimum fixed charge coverage ratio of 1.00 to 1.00, as defined in the Facility. If the availability is greater than twenty percent for both total and U.S. revolving credit facilities on a pro forma basis, the Company may pay dividends without any minimum fixed charge coverage ratio requirement. The Facility also requires the Company to achieve a minimum fixed charge coverage ratio in certain circumstances in which total excess availability is less than ten percent of the total commitments under the Facility or excess availability under the U.S. revolving credit facility is less than ten percent of the U.S. revolver commitments, as defined in the Facility. At December 31, 2018, the Company was in compliance with the covenants in the Facility.

In 2017, the Company entered into an agreement for a \$200.0 million term loan (the "Term Loan"), which matures in May 2023. The Term Loan requires quarterly principal payments on the last business day of each March, June, September and December in an amount equal to \$2.5 million. Payments commenced in September 2017 and the final principal repayment is due on May 30, 2023. The Company may also be required to make mandatory prepayments, in certain circumstances, as provided in the Term Loan. At December 31, 2018, there was \$185.0 million of principal outstanding under the Term Loan which has been reduced in the Consolidated Balance Sheet by \$3.7 million of discounts and unamortized deferred financing fees.

The obligations under the Term Loan are generally secured by a first lien on the present and future shares of capital stock, material real property, fixtures and general intangibles consisting of intellectual property (collectively, the "Term Loan Collateral") and a second lien on the remaining collateral of the U.S. borrowers in the Facility. The approximate book value of assets held as collateral under the Term Loan was \$610 million as of December 31, 2018.

Borrowings under the Term Loan bear interest at a floating rate, which can be a base rate or Eurodollar rate, as defined in the Term Loan, plus an applicable margin. The applicable margin, as provided in the Term Loan, is 2.25% for U.S. base rate loans and 3.25% for Eurodollar loans. The interest rate on the amount outstanding under the Term Loan at December 31, 2018 was 5.77%. In addition, the Term Loan includes restrictive covenants, which, among other things, limit additional borrowings and investments of the Company subject to certain thresholds, as provided in the Term Loan. The Term Loan limits the payment of regularly scheduled dividends and other restricted payments to \$50.0 million in any fiscal year, unless the consolidated total net leverage ratio, as defined in the Term Loan, does not exceed 1.75 to 1.00 at the time of the payment. At December 31, 2018, the Company was in compliance with the covenants in the Term Loan.

The Company incurred fees and expenses of \$0.6 million, \$4.7 million and 1.7 million in 2018, 2017 and 2016, respectively. These fees related to the amendment to the Facility and entry into the Term Loan. These fees were deferred and are being amortized as interest expense over the term of the applicable debt agreements. Fees related to the Term Loan are presented as a direct deduction of the corresponding debt.

The Company had other debt outstanding, excluding capital leases, of approximately \$92.9 million at December 31, 2018. In addition to the excess availability under the Facility, the Company had remaining availability of \$18.3 million related to other non-U.S. revolving credit agreements.

**NOTE 15—Leasing Arrangements**

The Company leases certain office, manufacturing and warehouse facilities and machinery and equipment under noncancellable capital and operating leases that expire at various dates through 2034. Many leases include renewal and/or fair value purchase options.

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Future minimum capital and operating lease payments at December 31, 2018 are:

	Capital Leases	Operating Leases
2019	\$ 7.1	\$ 22.2
2020	6.0	18.1
2021	3.4	14.0
2022	1.0	11.2
2023	0.7	8.2
Subsequent to 2023	—	30.2
<b>Total minimum lease payments</b>	<b>18.2</b>	<b>\$ 103.9</b>
Amounts representing interest	0.9	
<b>Present value of net minimum lease payments</b>	<b>17.3</b>	
Current maturities	6.7	
<b>Long-term capital lease obligation</b>	<b>\$ 10.6</b>	

Rental expense for all operating leases was \$23.0 million , \$22.5 million and \$17.3 million for 2018 , 2017 and 2016 , respectively. The Company also recognized \$7.0 million , \$7.9 million and \$5.3 million in rental income on subleases of equipment for 2018 , 2017 and 2016 , respectively. These subleases were primarily related to lift trucks in which the Company records revenues over the term of the lease in accordance with the rental agreements with its customers. The sublease rental income for these lift trucks is included in “Revenues” and the related rent expense is included in “Cost of sales” in the Consolidated Statements of Operations for each period. Aggregate future minimum rentals to be received under noncancellable subleases of lift trucks as of December 31, 2018 are \$26.0 million .

Assets recorded under capital leases are included in property, plant and equipment and consist of the following:

	December 31	
	2018	2017
Plant and equipment	\$ 38.7	\$ 35.9
Less accumulated amortization	(13.5)	(10.4)
	<b>\$ 25.2</b>	<b>\$ 25.5</b>

Amortization of plant and equipment under capital leases is included in depreciation expense. Capital lease obligations of \$4.7 million , \$0.2 million and \$12.8 million were incurred in connection with lease agreements to acquire machinery and equipment during 2018 , 2017 and 2016 , respectively.

**NOTE 16—Product Warranties**

The Company provides a standard warranty on its lift trucks, generally for six to twelve months or 1,000 to 2,000 hours . For certain series of lift trucks, the Company provides a standard warranty of one to two years or 2,000 or 4,000 hours . For components in some series of lift trucks, the Company provides a standard warranty of two to three years or 4,000 to 6,000 hours . The Company estimates the costs which may be incurred under its standard warranty programs and records a liability for such costs at the time product revenue is recognized.

In addition, the Company sells separately priced extended warranty agreements that generally provide a warranty for an additional two to five years or up to 2,400 to 10,000 hours . The specific terms and conditions of those warranties vary depending upon the product sold and the country in which the Company does business. Revenue received for the sale of extended warranty contracts is deferred and recognized in the same manner as the costs incurred to perform under the warranty contracts.

The Company also maintains a quality enhancement program under which it provides for specifically identified field product improvements in its warranty obligation. Accruals under this program are determined based on estimates of the potential number of claims and the cost of those claims based on historical costs.

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The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. Factors that affect the warranty liability include the number of units sold, historical and anticipated rates of warranty claims and the cost per claim.

Changes in the Company's current and long-term warranty obligations, including deferred revenue on extended warranty contracts, are as follows:

	2018	2017
Balance at January 1	\$ 51.0	\$ 52.3
Current year warranty expense	34.8	32.2
Change in estimate related to pre-existing warranties	(0.8)	(8.9)
Payments made	(27.2)	(26.5)
Foreign currency effect	(0.9)	1.9
<b>Balance at December 31</b>	<b>\$ 56.9</b>	<b>\$ 51.0</b>

**NOTE 17—Contingencies**

Various legal and regulatory proceedings and claims have been or may be asserted against the Company relating to the conduct of its businesses, including product liability, environmental and other claims. These proceedings and claims are incidental to the ordinary course of business. Management believes that it has meritorious defenses and will vigorously defend the Company in these actions. Any costs that management estimates will be paid as a result of these claims are accrued when the liability is considered probable and the amount can be reasonably estimated. Although the ultimate disposition of these proceedings is not presently determinable, management believes, after consultation with its legal counsel, that the likelihood is remote that costs will be incurred materially in excess of accruals already recognized.

**NOTE 18—Guarantees**

Under various financing arrangements for certain customers, including independent retail dealerships, the Company provides recourse or repurchase obligations such that it would be obligated in the event of default by the customer. Terms of the third-party financing arrangements for which the Company is providing recourse or repurchase obligations generally range from one to five years. Total amounts subject to recourse or repurchase obligations at December 31, 2018 and 2017 were \$192.7 million and \$203.5 million, respectively. As of December 31, 2018, losses anticipated under the terms of the recourse or repurchase obligations were not significant and reserves have been provided for such losses based on historical experience in the accompanying consolidated financial statements. The Company generally retains a security interest in the related assets financed such that, in the event the Company would become obligated under the terms of the recourse or repurchase obligations, the Company would take title to the assets financed. The fair value of collateral held at December 31, 2018 was approximately \$245.7 million based on Company estimates. The Company estimates the fair value of the collateral using information regarding the original sales price, the current age of the equipment and general market conditions that influence the value of both new and used lift trucks. The Company also regularly monitors the external credit ratings of the entities for which it has provided recourse or repurchase obligations. As of December 31, 2018, the Company did not believe there was a significant risk of non-payment or non-performance of the obligations by these entities; however, there can be no assurance that the risk may not increase in the future. In addition, the Company has an agreement with WF to limit its exposure to losses at certain eligible dealers. Under this agreement, losses related to \$48.4 million of recourse or repurchase obligations for these certain eligible dealers are limited to 7.5% of their original loan balance, or \$14.0 million as of December 31, 2018. The \$48.4 million is included in the \$192.7 million of total amounts subject to recourse or repurchase obligations at December 31, 2018.

Generally, the Company sells lift trucks through its independent dealer network or directly to customers. These dealers and customers may enter into a financing transaction with HYGFS or other unrelated third parties. HYGFS provides debt and lease financing to both dealers and customers. On occasion, the credit quality of a customer or credit concentration issues within WF may require the Company to provide recourse or repurchase obligations of the lift trucks purchased by customers and financed through HYGFS. At December 31, 2018, approximately \$163.1 million of the Company's total recourse or repurchase obligations of \$192.7 million related to transactions with HYGFS. In connection with the joint venture agreement, the Company also provides a guarantee to WF for 20% of HYGFS' debt with WF, such that the Company would become liable under the terms of HYGFS' debt agreements with WF in the case of default by HYGFS. At December 31, 2018, loans from WF

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

to HYGFS totaled \$1.2 billion . Although the Company's contractual guarantee was \$244.0 million , the loans by WF to HYGFS are secured by HYGFS' customer receivables, of which the Company guarantees \$163.1 million . Excluding the HYGFS receivables guaranteed by the Company from HYGFS' loans to WF, the Company's incremental obligation as a result of this guarantee to WF is \$218.3 million , which is secured by 20% of HYGFS' customer receivables and other secured assets of \$294.1 million . HYGFS has not defaulted under the terms of this debt financing in the past, and although there can be no assurances, the Company is not aware of any circumstances that would cause HYGFS to default in future periods.

The following table includes the exposure amounts related to the Company's guarantees at December 31, 2018 :

	<b>HYGFS</b>		<b>Total</b>	
Total recourse or repurchase obligations	<b>\$</b>	<b>163.1</b>	<b>\$</b>	<b>192.7</b>
Less: exposure limited for certain dealers		<b>48.4</b>		<b>48.4</b>
Plus: 7.5% of original loan balance		<b>14.0</b>		<b>14.0</b>
		<b>128.7</b>		<b>158.3</b>
Incremental obligation related to guarantee to WF		<b>218.3</b>		<b>218.3</b>
Total exposure related to guarantees	<b>\$</b>	<b>347.0</b>	<b>\$</b>	<b>376.6</b>

**NOTE 19—Equity Investments and Related Party Transactions**

The Company maintains an interest in one variable interest entity, HYGFS. HYGFS is a joint venture with WF formed primarily for the purpose of providing financial services to independent Hyster<sup>®</sup> and Yale<sup>®</sup> lift truck dealers and National Account customers in the United States and is included in the Americas segment. The Company does not have a controlling financial interest or have the power to direct the activities that most significantly affect the economic performance of HYGFS. Therefore, the Company has concluded that the Company is not the primary beneficiary and uses the equity method to account for its 20% interest in HYGFS. The Company does not consider its variable interest in HYGFS to be significant.

Generally, the Company sells lift trucks through its independent dealer network or directly to customers. These dealers and customers may enter into a financing transaction with HYGFS or other unrelated third parties. HYGFS provides debt financing to dealers and lease financing to both dealers and customers. HYGFS' total purchases of Hyster<sup>®</sup> and Yale<sup>®</sup> lift trucks from dealers, and directly from the Company such that HYGFS could provide retail lease financing to customers for the years ended December 31, 2018 , 2017 and 2016 were \$536.2 million , \$475.9 million and \$438.8 million , respectively. Of these amounts, \$79.5 million , \$71.1 million and \$69.4 million for the years ended December 31, 2018 , 2017 and 2016 , respectively, were invoiced directly from the Company to HYGFS so that the customer could obtain operating lease financing from HYGFS. Amounts receivable from HYGFS were \$11.2 million and \$10.4 million at December 31, 2018 and 2017 , respectively. The Company provides recourse for certain financing provided by HYGFS to its dealers and customers. In addition, the Company also provides a guarantee to WF for their portion of HYGFS' debt. Refer to Note 18 for additional details relating to the guarantees provided to WF.

In addition to providing financing to dealers, HYGFS provides operating lease financing to the Company. Operating lease obligations primarily relate to specific sale-leaseback-sublease transactions for certain customers whereby the Company sells lift trucks to HYGFS, leases these lift trucks back under an operating lease agreement and then subleases those lift trucks to customers under an operating lease agreement. Total obligations to HYGFS under the operating lease agreements were \$15.5 million and \$15.8 million at December 31, 2018 and 2017 , respectively. In addition, the Company provides certain subsidies to its dealers that are paid directly to HYGFS. Total subsidies were \$5.0 million , \$3.3 million and \$2.8 million for 2018 , 2017 and 2016 , respectively.

The Company provides certain services to HYGFS for which it receives compensation under the terms of the joint venture agreement. The services consist primarily of administrative functions and remarketing services. Total income recorded by the Company related to these services was \$8.0 million in 2018 , \$9.5 million in 2017 and \$9.8 million in 2016 .

The Company has a 50% ownership interest in SN, a limited liability company that was formed primarily to manufacture and distribute Sumitomo-branded lift trucks in Japan and export Hyster<sup>®</sup> - and Yale<sup>®</sup> - branded lift trucks and related components and service parts outside of Japan. The Company purchases products from SN under agreed-upon terms. The Company's ownership in SN is also accounted for using the equity method of accounting and is included in the JAPIC segment. The Company purchases products from SN under normal trade terms based on current market prices. In 2018 , 2017 and 2016 , purchases from

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

SN were \$65.4 million, \$46.8 million and \$55.0 million, respectively. Amounts payable to SN at December 31, 2018 and 2017 were \$21.3 million and \$18.1 million, respectively.

The Company recognized income of \$0.4 million, \$0.4 million and \$0.5 million for payments from SN for use of technology developed by the Company which is included in "Revenues" in the Consolidated Statements of Operations for the years ended December 31, 2018, 2017 and 2016, respectively.

Summarized unaudited financial information for equity investments is as follows:

	2018	2017	2016
<b>Statement of Operations</b>			
Revenues	\$ 413.0	\$ 350.3	\$ 326.7
Gross profit	\$ 126.9	\$ 111.9	\$ 103.4
Income from continuing operations	\$ 36.7	\$ 127.2	\$ 25.5
Net income	\$ 36.7	\$ 127.2	\$ 25.5
<b>Balance Sheet</b>			
Current assets	\$ 130.9	\$ 125.3	
Non-current assets	\$ 1,609.7	\$ 1,484.0	
Current liabilities	\$ 123.5	\$ 120.7	
Non-current liabilities	\$ 1,431.2	\$ 1,241.6	

The results of HYGFS for 2017, which are included in the table above, include a provisional benefit of \$99.2 million related to the Tax Reform Act, of which the Company recognized \$19.8 million under the equity method of accounting for HYGFS.

At December 31, 2018 and 2017, the investment in HYGFS was \$20.6 million and \$35.2 million, respectively, the investment in SN was \$41.3 million and \$36.8 million, respectively, and Bolzoni's investment in unconsolidated affiliates was \$0.5 million and \$0.5 million, respectively. The investments are included in "Investment in Unconsolidated Affiliates" in the Consolidated Balance Sheets. The Company received dividends of \$20.1 million, \$2.4 million and \$4.8 million from HYGFS in 2018, 2017 and 2016, respectively. The Company received dividends of \$2.1 million, \$0.4 million and \$0.3 million from SN in 2018, 2017 and 2016, respectively.

During 2018, the Company entered into a non-cash transaction to sell substantially all of Nuvera's PowerTap<sup>®</sup> hydrogen generator assets to a third-party, OneH2, Inc. ("OneH2"). In exchange, among other things, the Company received an approximately 14% ownership interest in OneH2. The Company accounts for this investment as an equity investment without a readily determinable fair value. The Company's investment was \$9.1 million as of December 31, 2018. There has been no change in the value of the investment during 2018.

During 2017, the Company acquired an equity investment in a third party, Balyo SA, for \$5.6 million. This investment is accounted for as an available-for-sale security and valued using a quoted market price in an active market, or Level 1 in the fair value hierarchy. The Company's investment as of December 31, 2018 was \$4.1 million, which includes a \$5.1 million loss for the year ended December 31, 2018 and is included on the line "Other" in the "Other (income) expense" section of the Consolidated Statements of Operations. The Company's investment as of December 31, 2017 was \$9.4 million, which includes a \$3.3 million unrealized gain (\$2.8 million net of tax) that was recorded in OCI in the Consolidated Balance Sheet. See Note 2 for the discussion of the change in accounting guidance for financial instruments on January 1, 2018.

**NOTE 20—Acquisitions**

On December 6, 2017, the Company's indirect wholly owned subsidiary, Hyster-Yale Acquisition Holding Ltd. ("Acquisition Co."), entered into an Equity Transfer Agreement ("ETA") with KNSN Pipe & Pile Company Limited ("KNSN"), pursuant to which Acquisition Co. agreed to purchase 75% of the equity interest of Zhejiang Maximal Forklift Co., Ltd. ("Maximal") from KNSN for an aggregate purchase price of \$90.0 million. After the closing under the ETA, the remaining 25% of the equity interest of Maximal is owned by senior management of Maximal, through Y-C Hong Kong Holding Company Limited ("HK Holding Co."). Maximal is a manufacturer of utility and standard lift trucks and specialized materials handling equipment founded in 2006 in the Hangzhou, Zhejiang Province of China.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**

*(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

Under the terms of the ETA, upon the closing on June 1, 2018, the Company paid \$81.0 million to a jointly-controlled bank account under the name of KNSN, and KNSN was only allowed to use such amount to repay intercompany indebtedness owed by KNSN to Maximal and to remove existing related-party guarantees provided by Maximal. Any balance amount remaining after fulfilling the specified purposes will belong to KNSN. The Maximal balance sheet as of June 1, 2018 includes \$65.7 million of receivables from KNSN included in other receivables in the table below, which were collected during June 2018 in accordance with the ETA. The proceeds were used by Maximal to repay \$59.9 million of short-term debt during June 2018. In addition, upon the closing of the acquisition, the Company paid \$9.0 million to an escrow account, which will be released to KNSN in two installments. The first installment of \$2.7 million will be released on the second anniversary of the closing and the second installment of \$6.3 million will be released on the third anniversary of the closing, subject to a number of conditions. KNSN is obligated to indemnify the Company from and against any breach of representations and warranties and any liabilities and losses associated with the pre-closing operations of Maximal.

In addition, the Company signed an incentive agreement with Mr. Jin Hong Lu, a key member of senior management of Maximal and the majority shareholder of KNSN. Pursuant to this agreement, the Company will pay \$10.0 million to Mr. Lu by the third anniversary of the closing under the ETA, provided that Mr. Lu, his immediate family members and any affiliates fully comply with the non-competition, conflict of interest, non-solicitation, and compliance covenants set forth in the agreement. The Company has recorded a liability of \$1.9 million related to the incentive agreement as of December 31, 2018.

Pursuant to the terms of the ETA, Mr. Lu signed and issued a Guarantee and Undertaking Letter for the benefit of the Company, guaranteeing KNSN's performance of all terms under the ETA. In the case of any breach of the ETA by KNSN, Mr. Lu shall be liable and shall indemnify the Company against any losses arising from such breach in accordance with the ETA and applicable laws.

The Company accounted for the acquisition of 75% equity interest of Maximal using the acquisition method of accounting, which requires, among other things, the assets acquired and liabilities assumed to be recognized at their respective fair values as of the acquisition date. In addition, the cash consideration paid was finalized with KNSN during September 2018 and the Company paid an additional \$3.2 million of consideration for working capital, cash and debt adjustments. The Company has not yet finalized its analysis of the fair value of income taxes, thus the allocation of the purchase price is preliminary and may change in future periods as fair value estimates of the assets acquired and liabilities assumed are refined during the measurement period. The Company will complete the purchase price allocation no later than the second quarter of 2019.

The following table summarizes the preliminary estimated fair values of the assets acquired and the liabilities assumed of Maximal as of June 1, 2018:

Cash	\$	15.3
Accounts receivable		13.2
Other receivables		68.9
Inventories		22.1
Property, plant and equipment		38.6
Intangible assets		21.4
Other assets		14.3
Total assets acquired	\$	193.8
Accounts payable		20.3
Short-term debt		77.6
Long-term deferred tax liabilities		8.5
Other liabilities		21.1
Total liabilities assumed	\$	127.5
Noncontrolling interest		28.2
Net assets acquired	\$	38.1
Purchase price		93.2
Goodwill	\$	55.1

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES***(Tabular Amounts in Millions, Except Per Share and Percentage Data)*

<b>Acquired Intangible Assets</b>	<b>Preliminary Fair Value</b>	<b>Preliminary Weighted-Average Useful Lives (Years)</b>	<b>Valuation Method</b>
Customer relationships	\$ 10.7	20	Excess Earnings
Patents	5.6	7	Relief from Royalty
Trademarks	5.1	20	Relief from Royalty
<b>Total</b>	<b>\$ 21.4</b>		

The fair value of accounts receivable acquired was \$13.2 million with the gross contractual amount being \$13.2 million. At the time of the acquisition, the Company expected to collect all accounts receivable. The \$55.1 million of goodwill was assigned to the JAPIC segment. The goodwill recognized is attributable primarily to expected synergies, production and design capability and the distribution network of Maximal. None of the goodwill is expected to be deductible for income tax purposes. The results of Maximal's operations have been included in the consolidated financial statements since the acquisition date and are reflected in the JAPIC segment. Subsequent to the acquisition, Maximal recorded \$48.9 million, \$4.8 million and \$1.4 million of revenues, operating loss and net loss attributable to stockholders, respectively, for the year ended December 31, 2018. Pro forma information has not been presented as it would not be materially different from historical reported results of operations.

The Company recognized \$3.3 million, \$2.5 million and \$6.6 million of acquisition-related costs, which are included in the Americas segment during 2018, 2017 and 2016, respectively. These costs are included in the line "Selling, general and administrative expenses" in the Consolidated Statements of Operations.



**SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS**  
**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**YEAR ENDED DECEMBER 31, 2018 , 2017 AND 2016**

Description	Balance at Beginning of Period	Additions		Deductions — Describe	Balance at End of Period
		Charged to Costs and Expenses	Charged to Other Accounts — Describe (A)		
(In millions)					
<b>2018</b>					
<b>Reserves deducted from asset accounts:</b>					
<b>Allowance for doubtful accounts (B)</b>	<b>\$ 8.7</b>	<b>\$ 1.9</b>	<b>\$ (0.9)</b>	<b>\$ — (C)</b>	<b>\$ 9.7</b>
2017					
Reserves deducted from asset accounts:					
Allowance for doubtful accounts (B)	\$ 14.9	\$ 0.2	\$ 1.1	\$ 7.5 (C)	\$ 8.7
2016					
Reserves deducted from asset accounts:					
Allowance for doubtful accounts (B)	\$ 12.8	\$ 6.3	\$ (2.7)	\$ 1.5 (C)	\$ 14.9

(A) Foreign currency translation adjustments and other.

(B) Includes allowance of receivables classified as long-term of \$4.3 million , \$5.0 million and \$4.6 million in 2018 , 2017 and 2016 , respectively.

(C) Write-offs, net of recoveries.

**AMENDMENT TO STOCKHOLDERS' AGREEMENT**

This AMENDMENT TO STOCKHOLDERS' AGREEMENT, dated as of October 30, 2018 (this "Amendment"), by and among the Depository, Hyster-Yale Materials Handling, Inc., a Delaware corporation (the "Corporation"), the new Participating Stockholder(s) identified on the signature pages hereto (a "New Participating Stockholder") and the Participating Stockholders under the Stockholders' Agreement, dated as of September 28, 2012, as amended (the "Stockholders' Agreement"), by and among the Depository, the Corporation and the Participating Stockholders. Capitalized terms defined in the Stockholders' Agreement are used herein as so defined.

This Amendment sets forth the terms and conditions on which each New Participating Stockholder will join in and become a party to the Stockholders' Agreement.

Pursuant to Section 8 of the Stockholders' Agreement, prior to the acquisition of Class B Common Stock by a Permitted Transferee, the Stockholders' Agreement may be amended to add a Permitted Transferee as a Participating Stockholder by a writing signed by the Signatories, the Corporation and such Permitted Transferee.

In consideration of the mutual promises hereinafter set forth and other good and valuable consideration had and received, the parties hereto agree as follows:

1. **Representations and Warranties.** Each New Participating Stockholder represents and warrants to the other Participating Stockholders and the Corporation as follows:

(a) The New Participating Stockholder is the beneficial owner of, or simultaneously with the execution hereof will acquire and be deemed to be the beneficial owner of, the shares of Class B Common Stock identified below such New Participating Stockholder's name on the signature pages hereto (except as otherwise described thereon), and except as otherwise described thereon such New Participating Stockholder does not own of record or beneficially or have any interest in any other shares of Class B Common Stock or any options to purchase or rights to subscribe or otherwise acquire any other shares of Class B Common Stock other than pursuant to the Stockholders' Agreement;

(b) The New Participating Stockholder has the right, power and authority to execute and deliver this Amendment and to perform such New Participating Stockholder's obligations hereunder and under the Stockholders' Agreement; if this Amendment is being executed by a trustee on behalf of a trust, such trustee has full right, power and authority to enter into this Amendment on behalf of the trust and to bind the trust and its beneficiaries to the terms hereof; if this Amendment is being executed on behalf of a Participating Stockholder Organization, the person executing this Amendment is a duly authorized representative of such Participating Stockholder Organization with full right, power and authority to execute and deliver this Amendment on behalf of such Participating Stockholder Organization and to bind such Participating Stockholder Organization to the terms hereof; the execution, delivery and performance of this Amendment by such New Participating Stockholder will not constitute a violation of, conflict with or result in a default under (i) any contract, understanding or arrangement to which such New Participating Stockholder is a party or by which such New Participating Stockholder is bound or require the consent of any other person or any party pursuant thereto; (ii) any organizational, charter or other governance documents (including, without limitation, any partnership agreement, certificate of incorporation, or bylaws) of the New

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Participating Stockholder, (iii) any judgment, decree or order applicable to such New Participating Stockholder; or (iv) any law, rule or regulation of any governmental body;

(c) This Amendment and the Stockholders' Agreement constitute legal, valid and binding agreements on the part of such New Participating Stockholder; the shares of Class B Common Stock owned beneficially by such New Participating Stockholder are fully paid and nonassessable; and

(d) The shares of Class B Common Stock owned beneficially by the New Participating Stockholder are now held by the New Participating Stockholder, free and clear of all adverse claims, liens, encumbrances and security interests (except as created by the Stockholders' Agreement and any Amendments thereto, including this Amendment, and the Restated Certificate).

2. Address for Notices. The address for all notices to each New Participating Stockholder provided pursuant to the Stockholders' Agreement shall be the address set forth below such New Participating Stockholder's name on the signature pages hereto, or to such other address as such New Participating Stockholder may specify to the Depository.

3. Agreement to be Bound by Stockholders' Agreement. Each New Participating Stockholder agrees to be bound by all of the terms and provisions of the Stockholders' Agreement applicable to Participating Stockholders.

4. Beneficiaries. Each New Participating Stockholder acknowledges that the Corporation and each Participating Stockholder is a beneficiary of this Amendment.

5. Amendment of Stockholders' Agreement. The Stockholders' Agreement is hereby amended to add the New Participating Stockholder as a Participating Stockholder.

6. Signature of Amendment by Trusts, Minors and Incompetents.

(a) In order for a trust exclusively (as defined in Section 1.11 of the Stockholders' Agreement) for the benefit of a Family Member or Members to be considered a Participating Stockholder:

(i) the trustee and all adult beneficiaries of such trusts having a current trust interest (as well as all Charitable Organization beneficiaries having a current trust interest) shall have previously signed the Stockholders' Agreement or shall sign this Amendment as a Participating Stockholder;

(ii) the trustee and a parent or legal guardian, for trusts with minor beneficiaries having a current trust interest, shall sign this Amendment on behalf of any such minor beneficiaries; or

(iii) the trustee and legal guardian, if any, for trusts with incompetent beneficiaries having a current trust interest, shall sign this Amendment on behalf of any such incompetent beneficiaries.

(b) If, at any time, any trust shall have an adult beneficiary (and such beneficiary is not incompetent) having a current trust interest or an ascertainable Charitable Organization beneficiary having a current trust interest and if such beneficiary has not previously signed the Stockholders' Agreement, then if such beneficiary shall fail or be unable to sign this Amendment for a period of 30 calendar days following notification to such beneficiary of the terms of this Amendment and the Stockholders' Agreement by the Depository and following signature of this Amendment by the trustee, the trust shall thereupon cease to be a Participating Stockholder and Section 3.2 of the Stockholders' Agreement shall then apply as if the shares of Class B Common Stock held by the

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trust were then to be converted. The donor of a trust that is revocable by the donor alone, during the lifetime of such donor, shall be considered the only beneficiary thereof so long as such trust is so revocable.

(c) In the case of Class B Common Stock held by a custodian under the Uniform Transfers to Minors Act (or the practical equivalent thereof) for the benefit of a minor Family Member, the custodian shall sign this Amendment on behalf of such minor if such minor is to be considered a Participating Stockholder.

(d) In the case of Class B Common Stock held in the name of a minor Family Member, a parent or legal guardian of such minor shall sign this Amendment on behalf of such minor if such minor is to be considered a Participating Stockholder.

(e) In the case of Class B Common Stock held in the name of an incompetent Family Member, the legal guardian of such incompetent shall sign this Amendment on behalf of such incompetent if such incompetent is to be considered a Participating Stockholder.

(f) When a minor described in Section 6(c) or (d) reaches the age of majority, or an incompetent described in Section 6(e) is no longer impaired by such disability and has reached the age of majority, such Family Member shall execute and deliver an Amendment which has been executed and delivered by the Participating Stockholders (or their attorney-in-fact), the Corporation and the Depository. If such Family Member shall fail or be unable to sign such Amendment for a period of 30 calendar days following notification to such Family Member of the terms of the Stockholders' Agreement by the Depository, such Family Member shall thereupon cease to be a Participating Stockholder and Section 3.2 of the Stockholders' Agreement shall then apply as if the shares of Class B Common Stock were then to be converted.

7. Power of Attorney. The undersigned New Participating Stockholder hereby constitutes and appoints Alfred M. Rankin, Jr., Kimberly J. Pustulka, and Suzanne Schulze Taylor and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and resubstitution, for the undersigned and in the name, place and stead of the undersigned, in any and all capacities to:

(a) execute any and all statements under Section 13 or Section 16 of the Securities Exchange Act of 1934 of beneficial ownership of shares of Class B Common Stock subject to the Stockholders' Agreement as amended by this Amendment, including all statements on Schedule 13D and all amendments thereto, all joint filing agreements pursuant to Rule 13d-1(k) under such Exchange Act in connection with such statements, all initial statements of beneficial ownership on Form 3 and any and all other documents to be filed with the Securities and Exchange Commission, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, and

(b) execute and deliver any and all Amendments whereby a Family Member, Charitable Organization or Participating Stockholder Organization becomes a Participating Stockholder or any other amendment to the Stockholders' Agreement in accordance with Section 8 of the Stockholders' Agreement, other than those amendments that (i) extend the term of the Stockholders' Agreement or (ii) amend Section 2, 3, 4 or 8 of the Stockholders' Agreement, thereby granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and to perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them, or their substitutes or resubstitutes, may lawfully do or cause to be done by virtue of this Section 7. The

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grant of this power of attorney shall not be affected by any disability of such undersigned New Participating Stockholder. If applicable law requires additional or substituted language or formalities (including witnesses or acknowledgments) in order to validate the power of attorney intended to be granted by this Section 7, each New Participating Stockholder agrees to execute and deliver such additional instruments and to take such further acts as may be necessary to validate such power of attorney.

8. Counterparts. This Amendment may be executed in multiple counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument, without production of the others.

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IN WITNESS WHEREOF, each New Participating Stockholder, the Participating Stockholders, the Corporation and the Depository have executed this Amendment or caused this Amendment to be executed in their respective names, all as of the date and year first above written.

Lauran Rankin Main Trust Agreement DTD 12/23/15,  
Trustee

\_\_\_\_\_  
/s/ Lauran Rankin  
(a new Participating Stockholder)

Address: \_\_\_\_\_  
\_\_\_\_\_

Number of Shares of  
Class B Common Stock

Certificate No.

\_\_\_\_\_

\_\_\_\_\_

IN WITNESS WHEREOF, each New Participating Stockholder, the Participating Stockholders, the Corporation and the Depository have executed this Amendment or caused this Amendment to be executed in their respective names, all as of the date and year first above written.

\_\_\_\_\_  
/s/ Lauran Rankin  
(a new Participating Stockholder)

Address: \_\_\_\_\_  
\_\_\_\_\_

Number of Shares of  
Class B Common Stock

Certificate No.

\_\_\_\_\_

\_\_\_\_\_

IN WITNESS WHEREOF, each New Participating Stockholder, the Participating Stockholders, the Corporation and the Depository have executed this Amendment or caused this Amendment to be executed in their respective names, all as of the date and year first above written.

/s/ Chloe Seelbach, custodian for Thomas Wilson Seelbach  
(a new Participating Stockholder)

Address: \_\_\_\_\_  
\_\_\_\_\_

Number of Shares of  
Class B Common Stock

Certificate No.

\_\_\_\_\_

\_\_\_\_\_





HYSTER-YALE MATERIALS HANDLING, INC., as Depository

By: /s/ Alfred M. Rankin, Jr.

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**HYSTER-YALE MATERIALS HANDLING, INC.**

By: /s/ Alfred M. Rankin, Jr.

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**THE PARTICIPATING STOCKHOLDERS**

listed in Exhibit A attached hereto  
and incorporated herein by this reference

By: /s/ Alfred M. Rankin, Jr.

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**PARTICIPATING STOCKHOLDERS**

1. Clara L. T. Rankin
  2. Alfred M. Rankin, Jr.
  3. Victoire G. Rankin
  4. Helen Rankin Butler (f/k/a Helen P. Rankin)
  5. Clara T. Rankin Williams (f/k/a Clara T. Rankin)
  6. Thomas T. Rankin
  7. Matthew M. Rankin
  8. James T. Rankin
  9. Claiborne R. Rankin
  10. Chloe O. Rankin
  11. Chloe R. Seelbach (f/k/a Chloe E. Rankin)
  12. Claiborne R. Rankin, Jr.
  13. Roger F. Rankin
  14. Bruce T. Rankin
  15. Martha S. Kelly
  16. Susan Sichel
  17. Jennifer T. Jerome
  18. Caroline T. Ruschell
  19. David F. Taplin
  20. Beatrice B. Taplin
  21. Thomas E. Taplin, Jr.
  22. Theodore D. Taplin
  23. Britton T. Taplin
  24. Frank F. Taplin
  25. Rankin Management, Inc.
  26. Rankin Associates I, L.P. (f/k/a CTR Family Associates, L.P.)
  27. The Trust created under the Agreement, dated December 28, 1976, between National City Bank, as trustee, and Clara L.T. Rankin, for the benefit of grandchildren
  28. The Trust created under the Agreement, dated July 20, 2000, as supplemented, amended and restated, between Alfred M. Rankin, Jr., as trustee, and Clara T. Rankin, for the benefit of Clara T. Rankin
  29. The Trust created under the Agreement, dated September 28, 2000, as supplemented, amended and restated, between Alfred M. Rankin, Jr., as trustee, and Alfred M. Rankin, Jr., for the benefit of Alfred M. Rankin, Jr.
  30. The Trust created under the Agreement, dated September 28, 2000, as supplemented, amended and restated, between Victoire G. Rankin, as trustee, and Victoire G. Rankin, for the benefit of Victoire G. Rankin
  31. The Trust created under the Agreement, dated December 29, 1967, as supplemented, amended and restated, between Thomas T. Rankin, as trustee, and Thomas T. Rankin, creating a trust for the benefit of Thomas T. Rankin
  32. The Trust created under the Agreement, dated June 22, 1971, as supplemented, amended and restated, between Claiborne R. Rankin, as trustee, and Claiborne R. Rankin, creating a trust for the benefit of Claiborne R. Rankin
  33. The Trust created under the Agreement, dated September 11, 1973, as supplemented, amended and restated, between Roger F. Rankin, as trustee, and Roger F. Rankin, creating a trust for the benefit of Roger F. Rankin
  34. The Trust created under the Agreement, dated September 28, 2000, between Alfred M. Rankin, Jr., as trustee, and Bruce T. Rankin, for the benefit of Bruce T. Rankin
  35. The Trust created under the Agreement, dated August 26, 1974, between National City Bank, as trustee, and Thomas E. Taplin, Jr., for the benefit of Thomas E. Taplin, Jr.
  36. The Trust created under the Agreement, dated October 15, 1975, between National City Bank, as trustee, and Theodore D. Taplin, for the benefit of Theodore D. Taplin
  37. The Trust created under the Agreement, dated December 30, 1977, as supplemented, amended and restated, between National City Bank, as trustee, and Britton T. Taplin for the benefit of Britton T. Taplin
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38. The Trust created under the Agreement, dated December 29, 1989, as supplemented, amended and restated, between Alfred M. Rankin, Jr., as trustee, and Clara T. (Rankin) Williams for the benefit of Clara T. (Rankin) Williams
  39. The Trust created under the Agreement, dated December 29, 1989, as supplemented, amended and restated, between Alfred M. Rankin, Jr., as trustee, and Helen P. (Rankin) Butler for the benefit of Helen P. (Rankin) Butler
  40. Corbin Rankin
  41. Alison A. Rankin
  42. National City Bank as agent under the Agreement, dated July 16, 1969, with Margaret E. Taplin
  43. Alison A. Rankin, as trustee fbo A. Farnham Rankin under Irrevocable Trust No. 1, dated December 18, 1997, with Roger Rankin, Grantor
  44. Alison A. Rankin, as trustee fbo Elisabeth M. Rankin under Irrevocable Trust No. 1, dated December 18, 1997, with Roger Rankin, Grantor
  45. Rankin Associates II, L.P.
  46. John C. Butler, Jr.
  47. Clara Rankin Butler (by John C. Butler, Jr. as custodian)
  48. The Trust created under the Agreement, dated July 24, 1998, as amended, between Frank F. Taplin, as trustee, and Frank F. Taplin, for the benefit of Frank F. Taplin
  49. David B. Williams
  50. Griffin B. Butler (by John C. Butler, Jr. as Custodian)
  51. Claiborne R. Rankin as Trustee of the Claiborne R. Rankin, Jr. Revocable Trust dated August 25, 2000
  52. Alison A. Rankin as Trustee under Irrevocable Trust No. 2, dated September 11, 2000, for the benefit of A. Farnham Rankin
  53. Alison A. Rankin as Trustee under Irrevocable Trust No. 2, dated September 11, 2000, for the benefit of Elisabeth M. Rankin
  54. Alison A. Rankin as Trustee of the Alison A. Rankin Revocable Trust, dated September 11, 2000
  55. The Trust created under the Agreement, dated December 20, 1993, between Thomas T. Rankin, as co-trustee, Matthew M. Rankin, as co-trustee, and Matthew M. Rankin, for the benefit of Matthew M. Rankin
  56. Scott Seelbach
  57. Margo Jamison Victoire Williams (by Clara Rankin Williams as Custodian)
  58. Trust created under the Agreement, dated June 1, 1995, between Chloe O. Rankin, as Trustee, and Chloe O. Rankin, for the benefit of Chloe O. Rankin
  59. Trust created by the Agreement, dated June 17, 1999, between John C. Butler, Jr., as trustee, and John C. Butler, Jr., creating a trust for the benefit of John C. Butler, Jr.
  60. Clara Rankin Butler 2002 Trust, dated November 5, 2002
  61. Griffin Bedwell Butler 2002 Trust, dated November 5, 2002
  62. Elizabeth B. Rankin
  63. Margo Jamison Victoire Williams 2004 Trust created by the Agreement, dated December 10, 2004, between David B.H. Williams, as trustee, and Clara Rankin Williams, creating a trust for the benefit of Margo Jamison Victoire Williams
  64. Helen Charles Williams 2004 Trust created by the Agreement, dated December 10, 2004, between David B.H. Williams, as trustee, and Clara Rankin Williams, creating a trust for the benefit of Helen Charles Williams
  65. Helen Charles Williams (by David B.H. Williams as Custodian)
  66. Julia L. Rankin Kuipers
  67. Trust created by the Agreement, dated December 21, 2004, between Claiborne R. Rankin, as trustee, and Julia L. Rankin, creating a trust for the benefit of Julia L. Rankin
  68. Thomas Parker Rankin
  69. Taplin Elizabeth Seelbach (by Scott Seelbach as Custodian)
  70. Trust created by the Agreement, dated December 21, 2004, between Chloe R. Seelbach, as trustee, and Claiborne R. Rankin, creating a trust for the benefit of Taplin Elizabeth Seelbach
  71. Rankin Associates IV, L.P.
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72. Marital Trust created by the Agreement, dated January 21, 1966, as supplemented, amended and restated, between National City Bank and Beatrice Taplin, as Trustees, and Thomas E. Taplin, for the benefit of Beatrice B. Taplin
  73. Trust created by the Agreement, dated May 10, 2007, between Mathew M. Rankin, as Grantor, and Mathew M. Rankin and James T. Rankin, as co-trustees, for the benefit of Mary Marshall Rankin
  74. Trust created by Agreement, dated May 10, 2007, between Mathew M. Rankin, as trustee, and James T. Rankin, creating a trust for the benefit of William Alexander Rankin
  75. Trust created by the Agreement dated December 21, 2004, between Chloe R. Seelbach, as trustee, and Claiborne R. Rankin, creating a trust for the benefit of Isabelle Scott Seelbach
  76. Lynne Turman Rankin
  77. Jacob A. Kuipers
  78. Alfred M. Rankin, Jr.'s 2011 Grantor Retained Annuity Trust
  79. Alfred M. Rankin, Jr. 2012 Retained Annuity Trust
  80. 2012 Chloe O. Rankin
  81. 2012 Corbin K. Rankin Trust
  82. 2012 Alison A. Rankin Trust
  83. 2012 Helen R. Butler Trust
  84. 2012 Clara R. Williams Trust
  85. The David B.H. Williams Trust, David B.H. Trustee u/a/d October 14, 2009
  86. Mary Marshall Rankin (by Matthew M. Rankin, as Custodian)
  87. William Alexander Rankin (by Matthew M. Rankin, as Custodian)
  88. Margaret Pollard Rankin (by James T. Rankin, as Custodian)
  89. Trust created by the Agreement, dated April 10, 2009, between Chloe R. Seelbach, as trustee, creating a trust for the benefit of Chloe R. Seelbach
  90. Trust created by the Agreement, dated December 21, 2004, between Chloe R. Seelbach, as trustee, and Claiborne R. Rankin, creating a trust for the benefit of Thomas Wilson Seelbach
  91. Isabelle Seelbach (by Chloe R. Seelbach, as Custodian)
  92. Elisabeth M. Rankin (by Alison A. Rankin, as Custodian)
  93. A. Farnham Rankin
  94. Taplin Annuity Trust #1 of Beatrice B. Taplin dated June 18, 2011
  95. The Beatrice B. Taplin Trust/Custody dtd December 12, 2001, Beatrice B. Taplin, as Trustee, for the benefit of Beatrice B. Taplin
  96. Cory Freyer
  97. Ngaio T. Lowry Trust, dated February 26, 1998, Caroline T. Ruschell, Trustee
  98. Caroline T. Ruschell Trust Agreement dated December 8, 2005, Caroline T. Ruschell as Trustee
  99. Jennifer Dickerman
  100. The Trust created under the Agreement dated January 5, 1977 between PNC Bank as Co-Trustee, Alfred M. Rankin, Jr., as Co-Trustee, for the benefit of Clara L.T. Rankin
  101. The Trust created under the Agreement, dated January 1, 1977, between PNC Bank, as Co-Trustee, Alfred M. Rankin, Jr., as Co-Trustee, and Clara L. T. Rankin, for the benefit of Clara L. T. Rankin
  102. Thomas E. Taplin Exempt Family Trust u/a dated January 21, 1966 and as amended, Beatrice Taplin, Trustee
  103. Thomas E. Taplin Exempt Family Trust u/a dated January 21, 1966 amended, per IRC 1015(A) Dual Basis Sub-Account, Beatrice Taplin, Trustee
  104. Alfred M. Rankin Jr.-Roth IRA- Brokerage Account #\*\*\*\*\*
  105. John C. Butler, Jr.-Roth IRA- Brokerage Account #\*\*\*\*\*
  106. DiAhn Taplin
  107. BTR 2012 Trust for Helen R. Butler
  108. BTR 2012 Trust for Clara R. Williams
  109. BTR 2012 Trust for James T. Rankin
  110. BTR 2012 Trust for Matthew M. Rankin
  111. BTR 2012 Trust for Thomas P. Rankin
  112. BTR 2012 Trust for Chloe R. Seelbach
  113. BTR 2012 Trust for Claiborne R. Rankin, Jr.
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114. BTR 2012 Trust for Julia R. Kuipers
115. BTR 2012 Trust for Anne F. Rankin
116. BTR 2012 Trust for Elisabeth M. Rankin
117. The Anne F. Rankin Trust dated August 15, 2012
118. Trust created by the Agreement, dated August 20, 2009 between James T. Rankin, as Trustee, and James T. Rankin, creating a trust for the benefit of James T. Rankin
119. Thomas P. K. Rankin, Trustee of the trust created by agreement, dated February 2, 2011, as Supplemented, amended and restated, between Thomas P.K. Rankin, as trustee, and Thomas P.K. Rankin, creating a trust for the benefit of Thomas P.K. Rankin
120. Claiborne R. Rankin Trust for the children of Julia R. Kuipers dated December 27, 2013 under the Custody Agreement dated December 27, 2013 fbo Evelyn R. Kuipers
121. AMR Associates, LP
122. Vested Trust for the benefit of Margaret Pollard Rankin U/A/D December 4, 2015
123. Vested Trust for the benefit of James T. Rankin, Jr. U/A/D December 4, 2015
124. Claiborne R. Rankin Trust for the children of Claiborne R. Rankin, Jr. dated August 26, 2016 for the benefit of Claiborne Read Rankin, III
125. Claiborne R. Rankin Trust for the children of Julia R. Kuipers dated December 27, 2013 fbo Matilda Alan Kuipers
126. Claiborne Read Rankin III (by Claiborne R. Rankin, Jr., as Custodian)
127. James T. Rankin, Jr. (by James T. Rankin, as Custodian)
128. Matilda Alan Kuipers (by Julia R. Kuipers, as Custodian)
129. Luran Rankin
130. Luran Rankin Main Trust u/a/d 12/23/15
131. Thomas Wilson Seelbach (by Chloe Seelbach, as Custodian)
132. Evelyn R. Kuipers (by Julia R. Kuipers, as Custodian)



**HYSTER-YALE MATERIALS HANDLING, INC. AND SUBSIDIARIES**  
**Director Fee Policy (Amended Effective as of January 1, 2019)**

This Director fee policy shall apply to each Director of Hyster-Yale Materials Handling, Inc. (Hyster-Yale) or one of its subsidiaries, other than (i) Directors who are full-time employees of Hyster-Yale or one of its subsidiaries or (ii) Directors who have entered into separate written fee agreements authorized by the Board of Directors and executed by an authorized officer of Hyster-Yale or one of its subsidiaries.

Each Director of Hyster-Yale will receive an annual retainer, of \$178,000, payable quarterly in arrears. Each quarterly payment shall consist of \$15,000 in cash and \$29,500 worth of Hyster-Yale Class A Common Stock, transfer of which is restricted pursuant to the terms of the Hyster-Yale Non-Employee Directors' Equity Compensation Plan.

Each Director of Hyster-Yale Group, Inc. who is not a Director of Hyster-Yale will receive an annual retainer of \$20,000, payable in cash quarterly in arrears in installments of \$5,000.

Each Chairman of a Committee of the Hyster-Yale Board of Directors will receive an additional annual Committee Chairman's fee of \$10,000, payable in cash quarterly in arrears in installments of \$2,500; provided, however, that the Chairman of the Audit Review Committee will receive an annual Committee Chairman's fee of \$15,000, payable in cash quarterly in arrears in installments of \$3,750. 100% of all fees paid for service as Chairman of a Committee is attributable to services for Hyster-Yale Group, Inc. and its subsidiaries.

Each member of a Committee (other than the Executive Committee) of the Hyster-Yale Board of Directors, including Committee Chairmen, will receive an additional annual Committee member's fee of \$7,000 for each Committee on which such Director serves, payable in cash quarterly in arrears in installments of \$1,750. 100% of all fees paid for service as a member of a Committee is attributable to services for Hyster-Yale Group, Inc. and its subsidiaries.

Each Director of Hyster-Yale or a Hyster-Yale subsidiary will be paid a meeting fee of (a) \$1,000 for each Hyster-Yale or subsidiary Board meeting attended, provided that no Director shall be paid for attendance at more than one Board meeting on any single day, and (b) \$1,000 for each Committee meeting attended. In the case of either joint meeting or joint committee meetings, the fees associated with that meeting will be allocated among the companies that actually met.

This amended policy is effective as of January 1, 2019

**AMENDMENT NO. 1  
TO THE HYSTER-YALE GROUP, INC.  
UNFUNDED BENEFIT PLAN  
( As Amended and Restated Effective January 1, 2016 )**

Hyster-Yale Group, Inc. hereby adopts this Amendment No. 1 to the Hyster-Yale Group, Inc. Unfunded Benefit Plan (As Amended and Restated Effective January 1, 2016) (the "Plan"), effective as of January 1, 2018. Words used herein with initial capital letters which are defined in the Plan are used herein as so defined.

**Section 1**

Section 5.1 of the Plan is hereby amended in its entirety to read as follows:

“ Section 5.1 Earnings .

(a) In General . Except as otherwise described in the Plan, for Plan Years commencing on and after January 1, 2018, at the end of each calendar month during a Plan Year through the end of the month prior to the payment date, the Account of the Covered Employees shall be credited with an amount determined by multiplying such Participant's average Sub-Account balance during such month by 2%. Notwithstanding the foregoing, in the event that the True-Up Interest Rate determined for such Plan Year exceeds the rate credited under the preceding sentence to the Covered Employee's Account, such Account shall retroactively be credited with the excess (if any) of (i) the amount determined under the preceding sentence over (ii) the amount determined by multiplying the Participant's Account balance during each month of such Plan Year by the True-Up Interest Rate determined for such Plan Year, compounded monthly. If a Participant incurs a Termination of Employment, this True-Up Interest Rate calculation shall be made during the month in which the Participant incurs such Termination of Employment and shall be based on the year-to-date True-Up Interest Rate for the month ending prior to the date the Participant incurs a Termination of Employment, as determined by the Committee in its sole discretion. For any subsequent month following such Termination of Employment, the True-Up Interest Rate calculation shall not apply.

(b) Prior Plan Years . Notwithstanding anything in the Plan to the contrary, any interest credited to a Participant's Account with respect to 2017 or prior Plan Years will be provided under the terms and conditions of the Plan as it existed on December 31, 2017.”

EXECUTED this 28th day of December, 2018.

**HYSTER-YALE GROUP, INC.**

By: /s/ Amy E. Gerbick  
Amy E. Gerbick  
Title: Associate General Counsel,  
Director of Corporate Compliance  
and Assistant Secretary

**AMENDMENT NO. 1  
TO THE HYSTER-YALE GROUP, INC.  
EXCESS RETIREMENT PLAN  
( Amended and Restated Effective January 1, 2016 )**

Hyster-Yale Group, Inc. (the “Company”) hereby adopts this Amendment No. 1 to the Hyster-Yale Group, Inc. Excess Retirement Plan (Amended and Restated Effective January 1, 2016) (the “Plan”), to be effective as of January 1, 2018. Words used herein with initial capital letters which are defined in the Plan are used herein as so defined.

**Section 1**

Section 2.6 of the Plan is hereby amended in its entirety to read as follows:

“ Section 2.6. Employer shall mean the Company, Nuvera Fuel Cells, LLC and Bolzoni Auramo, Inc.”

**Section 2**

Section 2.8 of the Plan is hereby amended in its entirety to read as follows:

“ Section 2.8 Fixed Income Fund shall mean the Vanguard Retirement Savings Trust III investment fund under the Profit Sharing Plan or any equivalent fixed income fund thereunder which is designated by the Company’s Retirement Funds Investment Committee as the successor thereto.”

**Section 3**

Section 3.2(c)(i) of the Plan is hereby amended in its entirety to read as follows:

“(i) The Basic Excess 401(k) Benefits shall be determined by multiplying each Excess 401(k) Benefit by a fraction, the numerator of which is the lesser of the percentage of Compensation elected to be deferred in the deferral election form for such Plan Year or 6% and the denominator of which is the percentage of Compensation elected to be deferred; and”

**Section 4**

Section 3.2(c)(ii) of the Plan is hereby amended in its entirety to read as follows:

“(ii) The Additional Excess 401(k) Benefits (if any) shall be determined by multiplying each Excess 401(k) Benefit by a fraction, the numerator of which is the excess (if any) of (1) the percentage of Compensation elected to be deferred in the deferral election form for such Plan Year over (2) 6%, and the denominator of which is the percentage of Compensation elected to be deferred.”

EXECUTED this 11th day of December, 2017.

**HYSTER-YALE GROUP, INC.**

By: /s/ Suzanne S. Taylor  
Suzanne S. Taylor  
Title: Senior Vice President,  
General Counsel and Secretary

**SUBSIDIARIES OF HYSTER-YALE MATERIALS HANDLING, INC.**

The following is a list of active subsidiaries as of the date of the filing with the Securities and Exchange Commission of the Annual Report on Form 10-K to which this is an Exhibit. Except as noted, all of these subsidiaries are wholly owned, directly or indirectly.

<u>Name</u>	<u>Incorporation</u>
Auramo OY	Finland
Auramo ZA	South Africa (40%)
Bolzoni Auramo AB	Sweden
Bolzoni Auramo B.V.	Holland (51%)
Bolzoni Auramo Canada Ltd.	Canada
Bolzoni Auramo Inc.	South Carolina
Bolzoni Auramo Polska SP Zoo	Poland (60%)
Bolzoni Auramo Pty Ltd.	Australia
Bolzoni Auramo (Shanghai) Forklift Truck Attachment Co. Ltd.	China (60%)
Bolzoni Auramo SL Sociedad Unipersonal	Spain
Bolzoni Auramo (Wuxi) Forklift Truck Attachment Co. Ltd.	China (80%)
Bolzoni Capital Holding B.V.	Netherlands
Bolzoni Capital UK, Limited	United Kingdom
Bolzoni Italia Srl	Italy
Bolzoni (Hebei) Forks	China (80%)
Bolzoni Holdings LLC	Delaware
Bolzoni Holding Hong Kong	Hong Kong (PRC)(80%)
Bolzoni Holding SpA	Italy
Bolzoni Ltd.	United Kingdom
Bolzoni Portugal Lda.	Portugal (31%)
Bolzoni Sarl	France
Bolzoni SpA	Italy
G2A	France (75%)
Hangzhou SAMUK Material Handling Equipment Co. Ltd.	China (75%)
Hiroshima Yale Co., Ltd.	Japan (10%)
HYG Financial Services, Inc.	Delaware (20%)
HYG Telematics Solutions Limited	United Kingdom
Hyster (H.K.) Limited	Hong Kong (PRC)
Hyster Overseas Capital Corporation, LLC	Delaware
Hyster Singapore Pte Ltd	Singapore
Hyster-Yale Acquisition Holding Limited	United Kingdom
Hyster-Yale Australia Holding Pty Ltd.	Australia
Hyster-Yale Asia-Pacific Pty, Ltd.	Australia
Hyster-Yale Brasil Empilhadeiras Ltda.	Brazil
Hyster-Yale Canada ULC	Canada
Hyster-Yale Deutschland GmbH	Germany
Hyster-Yale France S.A.R.L.	France
Hyster-Yale Group, Inc.	Delaware
Hyster-Yale Group Limited	United Kingdom
Hyster-Yale Holding B.V.	Netherlands
Hyster-Yale International B.V.	Netherlands
Hyster-Yale Italia SpA	Italy
Hyster-Yale Lift Trucks India Private Limited	India
Hyster-Yale Maximal Forklift (Zhejiang) Co., Ltd.	China (75%)
Hyster-Yale Mauritius	Mauritius
Hyster-Yale Mexico S.A. de C.V.	Mexico
Hyster-Yale Nederland B.V.	Netherlands
Hyster-Yale UK Limited	United Kingdom
Hyster-Yale UK Pension Co. Limited	United Kingdom



**Name**

LLC Hans H. Meyer OOO  
Meyer GmbH  
Nuvera Fuel Cells, LLC.  
Onoda Industry Co. Ltd.  
Shanghai Hyster Forklift, Ltd.  
Shanghai Hyster International Trading Co. Ltd.  
SNP Estate Corporation  
Suminac Philippines, Inc.  
Sumitomo NACCO Forklift Co., Ltd.  
Sumitomo NACCO Forklift Sales Co., Ltd.  
Sumitomo NACCO Forklift Vietnam Co., Ltd.  
Tohoku Shinko Co., Ltd.  
Tokai Shinko Co., Ltd.  
Weil Corporation  
Yale Materials Handling UK Ltd.  
Yale SLT Fordertechnik GmbH

**Incorporation**

Russia (80%)  
Germany  
Delaware  
Japan (20%)  
China  
China  
Philippines (50%)  
Philippines (50%)  
Japan (50%)  
Japan (50%)  
Vietnam (50%)  
Japan (47%)  
Japan (15%)  
Philippines (47%)  
United Kingdom  
Germany

**Consent of Independent Registered Public Accounting Firm**

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

- (1) Registration Statement on Form S-8 pertaining to the Hyster-Yale Materials Handling, Inc. Supplemental Long-Term Equity Incentive Plan of Hyster-Yale Materials Handling, Inc. for the registration of 100,000 shares of Class A common stock;
- (2) Registration Statement on Form S-8 pertaining to the Hyster-Yale Materials Handling, Inc. Non-Employee Directors' Equity Compensation Plan of Hyster-Yale Materials Handling, Inc. for the registration of 100,000 shares of Class A common stock;
- (3) Registration Statement on Form S-8 pertaining to the Hyster-Yale Materials Handling, Inc. Long-Term Equity Incentive Plan of Hyster-Yale Materials Handling, Inc. for the registration of 750,000 shares of Class A common stock;

of our reports dated February 26, 2019 , with respect to the consolidated financial statements and schedule of Hyster-Yale Materials Handling, Inc. and Subsidiaries and the effectiveness of internal control over financial reporting of Hyster-Yale Materials Handling, Inc. and Subsidiaries included in this Annual Report (Form 10-K) of Hyster-Yale Materials Handling, Inc. and Subsidiaries for the year ended December 31, 2018 .

/s/ Ernst & Young LLP

Cleveland, Ohio  
February 26, 2019

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ James B. Bemowski

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James B. Bemowski

February 18, 2019

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Date



**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ J.C. Butler, Jr.

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John C. Butler, Jr.

February 18, 2019

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Date

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Carolyn Corvi

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Carolyn Corvi

February 18, 2019

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Date

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ John P. Jumper

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John P. Jumper

February 18, 2019

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Date

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Dennis W. LaBarre

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Dennis W. LaBarre

February 18, 2019

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Date

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ H. Vincent Poor

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H. Vincent Poor

February 18, 2019

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Date

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Claiborne R. Rankin

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Claiborne R. Rankin

February 18, 2019

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Date

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ John M. Stropki

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John M. Stropki

February 18, 2019

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Date

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Britton T. Taplin

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Britton T. Taplin

February 18, 2019

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Date



**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned Director of Hyster-Yale Materials Handling, Inc. hereby constitutes and appoints Kenneth C. Schilling and Suzanne S. Taylor, and each of them, as the true and lawful attorney or attorneys-in-fact, with full power of substitution and revocation, for the undersigned and in the name, place and stead of the undersigned, to sign on behalf of the undersigned as Director of Hyster-Yale Materials Handling, Inc., a Delaware corporation, an Annual Report pursuant to Section 13 of the Securities Exchange Act of 1934 on Form 10-K for the fiscal year ended December 31, 2018, and to sign any and all amendments to such Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney or attorneys-in-fact, and each of them, full power and authority to do so and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorney or attorneys-in-fact or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Eugene Wong

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Eugene Wong

February 18, 2019

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Date

**Certifications**

I, Alfred M. Rankin, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of Hyster-Yale Materials Handling, Inc.;
2. Based on my knowledge, this 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 report;
3. Based on my knowledge, the financial statements, and other financial information included in this 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 report;
4. The registrant's other certifying officer(s) 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 15-d-15(f)), for the registrant and 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 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 report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) 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 officer(s) 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 the 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, 2019

/s/ Alfred M. Rankin, Jr.

Alfred M. Rankin, Jr.

Chairman, President and Chief Executive Officer  
(principal executive officer)

**Certifications**

I, Kenneth C. Schilling, certify that:

1. I have reviewed this annual report on Form 10-K of Hyster-Yale Materials Handling, Inc.;
2. Based on my knowledge, this 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 report;
3. Based on my knowledge, the financial statements, and other financial information included in this 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 report;
4. The registrant's other certifying officer(s) 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 15-d-15(f)), for the registrant and 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 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 report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) 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 officer(s) 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 the 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, 2019

/s/ Kenneth C. Schilling

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Kenneth C. Schilling

Senior Vice President and Chief Financial Officer  
(principal financial and accounting officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Hyster-Yale Materials Handling, Inc. (the "Company") on Form 10-K for the year ended December 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Date: February 26, 2019

/s/ Alfred M. Rankin, Jr.

Alfred M. Rankin, Jr.

Chairman, President and Chief Executive Officer  
(principal executive officer)

Date: February 26, 2019

/s/ Kenneth C. Schilling

Kenneth C. Schilling

Senior Vice President and Chief Financial Officer  
(principal financial and accounting officer)