

AMERICAN AXLE & MANUFACTURING HOLDINGS INC  
Form 10-K  
February 16, 2018

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

FORM 10-K

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

For the fiscal year ended December 31, 2017

or

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 1-14303

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE 38-3161171  
(State or other jurisdiction of (I.R.S. Employer  
incorporation or organization) Identification No.)

ONE DAUCH DRIVE, DETROIT, MICHIGAN 48211-1198

(Address of principal executive offices) (Zip Code)

313-758-2000

(Registrant's telephone number, including area code)

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

Title of Each Class

COMMON STOCK, PAR VALUE \$0.01 PER SHARE

PREFERRED SHARE PURCHASE RIGHTS, PAR VALUE \$0.01 PER  
SHARE

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

Name of Each Exchange on Which  
Registered

NEW YORK STOCK EXCHANGE

NEW YORK STOCK EXCHANGE

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  
Exchange Act. Yes  No

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

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

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
(Do not check if small reporting company)

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

The closing price of the Common Stock on June 30, 2017 as reported on the New York Stock Exchange was \$15.60 per share and the aggregate market value of the registrant's Common Stock held by non-affiliates was approximately \$1,311.2 million.

As of February 13, 2018, the number of shares of the registrant's Common Stock, \$0.01 par value, outstanding was 111,299,405 shares.

#### Documents Incorporated by Reference

Portions of the registrant's Annual Report to Stockholders for the year ended December 31, 2017 and Proxy Statement for use in connection with its Annual Meeting of Stockholders to be held on May 3, 2018, to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after December 31, 2017, are incorporated by reference in Part I (Items 1, 1A, 1B, 2, 3 and 4), Part II (Items 5, 6, 7, 7A, 8, 9, 9A and 9B), Part III (Items 10, 11, 12, 13 and 14) and Part IV (Item 15) of this Report.

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## Part I

### Item 1. Business

As used in this report, except as otherwise indicated in information incorporated by reference, references to “our Company,” “we,” “our,” “us” or “AAM” mean American Axle & Manufacturing Holdings, Inc. (Holdings) and its subsidiaries and predecessors, collectively.

#### General Development of Business

Holdings, a Delaware corporation, is a successor to American Axle & Manufacturing of Michigan, Inc., a Michigan corporation, pursuant to a migratory merger between these entities in 1999.

On April 6, 2017, Alpha SPV I, Inc., a wholly-owned subsidiary of Holdings, merged with and into Metaldyne Performance Group, Inc. (MPG), with MPG as the surviving corporation in the merger. Upon completion of the merger, MPG became a wholly-owned subsidiary of Holdings.

#### Information About Segments

Prior to our acquisition of MPG on April 6, 2017, we operated in one reportable segment: the manufacture, engineer, design and validation of driveline systems and related components and chassis modules for light trucks, sport utility vehicles (SUVs), crossover vehicles, passenger cars and commercial vehicles. Subsequent to our acquisition of MPG, our business was organized into four operating segments, each representing a reportable segment under Accounting Standards Codification (ASC) 280 Segment Reporting. Our four segments are Driveline, Metal Forming, Powertrain and Casting.

Our product offerings by segment are as follows:

Driveline products consist primarily of axles, driveshafts, power transfer units, rear drive modules, transfer cases, and electric and hybrid driveline products and systems for light trucks, SUVs, crossover vehicles, passenger cars and commercial vehicles;

Metal Forming products consist primarily of axle and transmission shafts, ring and pinion gears, differential gears, transmission gears and shafts, and suspension components for Original Equipment Manufacturers and Tier I automotive suppliers;

The Powertrain segment products consist primarily of transmission module and differential assemblies, transmission valve bodies, connecting rod forging and assemblies, torsional vibration dampers, and variable valve timing products for Original Equipment Manufacturers and Tier I automotive suppliers; and

The Casting segment produces both thin wall castings and high strength ductile iron castings, as well as differential cases, steering knuckles, control arms, brackets, and turbo charger housings for the global light vehicle, commercial and industrial markets.

#### Narrative Description of Business

##### Company Overview

Upon completion of our acquisition of MPG in April 2017, we became a global Tier I supplier to the automotive, commercial and industrial markets. We design, engineer, validate and manufacture driveline, metal forming,

powertrain and casting products, employing over 25,000 associates, operating at more than 90 facilities in 17 countries, to support our customers on global and regional platforms with a continued focus on delivering operational excellence, technology leadership and quality.

We are the principal supplier of driveline components to General Motors Company (GM) for its full-size rear-wheel drive (RWD) light trucks and SUVs manufactured in North America, supplying substantially all of GM's rear axle and four-wheel drive and all-wheel drive (4WD/AWD) axle requirements for these vehicle platforms. We also

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supply GM with various products from our each of our Metal Forming, Powertrain and Casting segments. Sales to GM were approximately 47% of our consolidated net sales in 2017, 67% in 2016, and 66% in 2015.

We are also a supplier to GM for certain axles and other driveline products for the life of each GM vehicle program covered by Lifetime Program Contracts and Long Term Program Contracts (collectively, LPCs). Substantially all of our sales to GM are made under purchase orders pursuant to the LPCs. The LPCs have terms equal to the lives of the relevant vehicle programs or their respective derivatives, which typically run five to seven years, and require us to remain competitive with respect to technology, design, quality and cost.

We also supply driveline system products to FCA US LLC (FCA) for heavy-duty Ram full-size pickup trucks and its derivatives, the AWD Jeep Cherokee, and a passenger car driveshaft program. In addition we sell various products to FCA from each of our Metal Forming, Powertrain and Casting segments. Sales to FCA were approximately 14% of our consolidated net sales in 2017, 18% in 2016 and 20% in 2015.

In addition to GM and FCA, we are a supplier to several major automotive Original Equipment Manufacturers (OEMs) and Tier I suppliers. Our consolidated net sales to customers other than GM were \$3,334.6 million in 2017 as compared to \$1,287.8 million in 2016 and \$1,317.1 million in 2015. The increase in sales to customers other than GM in 2017, as compared to 2016 and 2015, is primarily attributable to our acquisition of MPG.

#### Business Strategy

We have aligned our business strategy to build value for our key stakeholders. We accomplish our strategic objectives by capitalizing on our competitive strengths and continuing to diversify our customer, product and geographic sales mix, while providing exceptional value to our customers.

#### Competitive Strengths

We achieve our strategic objectives by emphasizing a commitment to:

Sustaining our operational excellence and focus on cost management to deliver exceptional value to our customers.

In 2017, AAM received GM's 2016 Supplier of the Year Award, which is awarded to suppliers that consistently exceed GM's expectations, create outstanding value or bring new innovations to the company.

Also in 2017, we successfully launched approximately 75 programs and facilities across our four business units, and received new business awards from a variety of customers, including a new contract further commercializing our electric driveline systems technology at our e-AAM Driveline Systems AB (e-AAM) subsidiary.

We continue to focus on cost management through the implementation of the AAM Operating System to improve quality, eliminate waste and reduce lead time and total costs globally.

We have established a cost competitive, operationally flexible global manufacturing, engineering and sourcing footprint to increase our presence in global growth markets, support global product development initiatives and establish regional cost competitiveness.

Our business is vertically integrated to reduce cost and mitigate risk in the supply chain. Our acquisition of USM Mexico Manufacturing LLC (USM Mexico) in the first quarter of 2017 furthered our efforts to vertically integrate the supply chain and helped ensure continuity of supply for certain parts to our largest manufacturing facility.

Maintaining our high quality standards, which are the foundation of our product durability and reliability.

In 2017, the following facilities were recognized with the GM Supplier Quality Excellence Award for outstanding quality performance: Auburn Hills Manufacturing Facility in Michigan, Bluffton Manufacturing Facility in Indiana, Chicago Manufacturing Facility in Illinois, Colfor Minerva Manufacturing Facility in Ohio, Changshu Manufacturing Facility in China and Pyeongtaek Manufacturing Facility in South Korea.

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In 2017, our Twinsburg Manufacturing Facility in Ohio earned the highest score possible on GM's Built in Quality Supply Base (BIQS) audit, and our Rayong Manufacturing Facility in Thailand earned Ford's Q1 Certification in recognition of the facility's high standards of quality.

Also in 2017, our Ramos Manufacturing Facility in Mexico earned the FCA Outstanding Quality Award, our Swidnica Manufacturing location in Poland earned the Jaguar Land Rover (JLR) "Q" Award, and our Oxford Manufacturing Facility in Michigan earned the Hino Quality Achievement Award.

AAM has an enhanced internal quality assurance system that drives continuous improvement to meet and exceed the growing expectations of our OEM customers.

Achieving technology leadership by delivering innovative products which improve the diversification of our product portfolio while increasing our total global served market.

In our Driveline segment, AAM's significant investment in research and development (R&D) has resulted in the development of advanced technology products designed to assist our customers in meeting the market demands for improved fuel efficiency; lower emissions; enhanced power density; advanced, sophisticated electronic controls; improved safety, ride and handling performance; and enhanced reliability and durability.

e-AAM was created to design and commercialize battery electric and hybrid driveline systems designed to improve fuel efficiency, reduce CO<sub>2</sub> emissions and provide AWD capability. e-AAM has secured two driveline systems contracts featuring patented e-AAM<sup>TM</sup> electric driveline systems technology. One of these programs is expected to launch in 2018, while the other is expected to launch by 2020.

AAM's EcoTrac<sup>®</sup> Disconnecting AWD system is a fuel-efficient driveline system that provides OEMs the option of an all-wheel-drive system that disconnects when not needed to improve fuel efficiency and reduce CO<sub>2</sub> emissions compared to conventional AWD systems. This technology is featured on GM's newly designed Chevrolet Equinox and GMC Terrain, as well as FCA's AWD Jeep Cherokee and its derivatives. We are currently designing the next generation of our EcoTrac<sup>®</sup> Disconnecting AWD system (EcoTrac<sup>®</sup> Gen II), which is smaller, lighter in weight and recovers up to an estimated 90% of fuel penalty, compared to 80% currently. EcoTrac<sup>®</sup> Gen II is expected to launch in 2018.

AAM has established a high-efficiency product portfolio that is designed to improve axle efficiency and fuel economy through innovative product design technologies. As our customers focus on reducing weight through the use of aluminum and other lightweighting alternatives, AAM is well positioned to offer innovative, industry leading solutions. Our portfolio includes high-efficiency axles, aluminum axles and AWD applications for hybrid electric vehicles to full-electric vehicles. AAM's Quantum<sup>TM</sup> lightweight axle technology features a revolutionary design, which offers significant mass reduction and increased fuel economy and efficiency that is scalable across multiple applications without loss of performance or power.

In our Powertrain segment, we have identified opportunities to apply our high strength connecting rod technology and refined vibration control systems to support hybrid powertrain systems and power dense four cylinder and three cylinder engines that are smaller in size.

In our Metal Forming segment, we have developed forged axle tubes, which deliver significant weight and cost reductions as compared to the traditional welded axle tubes.

Our Casting segment has developed patented high strength ductile iron called Ductile - ITE<sup>TM</sup>, which provides the potential to reduce mass by up to 20% while providing greater overall strength. Also in our Casting segment, we have



identified an opportunity to begin utilizing three-dimensional printed sand cores in our production process, which has the potential to reduce costs and floor space requirements.

We continue to invest in emerging technology such as torque biasing capability. We have developed capabilities in the areas of control systems and mechatronics to further integrate electronic components such as motors, actuators, and sensors into AAM's mechanical technology to enhance vehicle performance and provide superior torque management.

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To accelerate AAM's technological advancements, we have established our Advanced Technology Development Center (ATDC) at our Detroit campus. This state-of-the-art facility is our center for technology benchmarking, prototype development, advanced technology development, supplier collaboration, customer showcasing and associate training on our future products, processes, and systems.

#### Diversification of Customer, Product and Geographic Sales Mix

Another element of building value for our key stakeholders is the diversification of our business through the growth of new and existing customer relationships and expansion of our product portfolio.

We continue to evaluate and consider strategic opportunities that will complement our core strengths and supplement our diversification strategies while providing future, profitable growth prospects. Our acquisition of MPG in 2017 was a key step in achieving our goals of customer, product and geographic diversification.

In addition to maintaining and building upon our longstanding relationships with GM and FCA, we are focused on generating profitable growth with new and existing global OEM customers. New business launches in 2017 included key customers such as Ford, Jaguar Land Rover and Nissan.

We are working on approximately \$1.5 billion in quoted and emerging new business opportunities. These opportunities would allow us to continue the diversification and expansion of our customer base, product portfolio and global footprint.

We are focused on increasing our presence in global markets to support our customers' platforms.

As our customers continue to design their products for global markets, they will require global support from their suppliers. For this reason, it is critical that we maintain a global presence in these markets in order to remain competitive for new contracts. As a result of our acquisition of MPG, we have expanded our global presence, primarily in Europe and Asia.

Our joint venture (JV) with Hefei Automobile Axle Co., Ltd. (HAAC), a subsidiary of the JAC Group (Anhui Jianghuai Automotive Group Co., Ltd.), which includes 100% of HAAC's light commercial axle business, continues to be a strong advantage for building relationships with leading Chinese light truck manufacturers. HAAC supplies front and rear beam axles to several leading Chinese light truck manufacturers, including JAC and Foton (Beiqi Foton Motor Co., Ltd.).

#### Competition

We compete with a variety of independent suppliers and distributors, as well as with the in-house operations of certain vertically integrated OEMs. Technology, design, quality and cost are the primary elements of competition in our industry segment. In addition to traditional competitors in the automotive sector, the trend towards advanced electronic integration has increased the level of new market entrants, including technology companies.

#### Industry Trends

See Item 7, "Management's Discussion and Analysis - Industry Trends."

#### Productive Materials

We believe that we have adequate sources of supply of productive materials and components for our manufacturing needs. Most raw materials (such as steel) and semi-processed or finished items (such as castings) are available within the geographical regions of our operating facilities from qualified sources in quantities sufficient for our needs. We currently have contracts with our steel suppliers that ensure continuity of supply to our principal operating facilities. We also have validation and testing capabilities that enable us to strategically qualify steel sources on a global basis. As we continue to expand our global manufacturing footprint, we may need to rely on suppliers in local markets that have not yet proven their ability to meet our requirements.

## Research and Development (R&D)

We continue to invest in the development of new products, processes and systems to improve efficiency and flexibility in our operations and continue to deliver innovative new products to our customers.

In 2017, R&D spending was \$161.5 million as compared to \$139.8 million in 2016 and \$113.9 million in 2015. The focus of this investment continues to be developing innovative products for the automotive market. Product development includes power transfer units, transfer cases, driveline and transmission differentials, multi-piece driveshafts, constant velocity joints, torque transfer devices, chassis modules and front and rear drive axles. We continue to focus on electronic integration in our existing and future products to advance their performance. We also continue to support the development of hybrid and electric vehicle systems. Special emphasis is placed on the development of products and systems that provide our customers with advancements in fuel efficiency and emissions reduction, and improved performance metrics such as noise vibration harshness (NVH), power density, and traction control improvements for safety and stability. Our efforts in these areas have resulted in the development of prototypes and various configurations of our products for several customers throughout the world.

Our e-AAM subsidiary engineers and develops battery electric and hybrid driveline systems to be commercialized for crossover vehicles and passenger cars. These systems are designed to improve fuel efficiency, reduce CO<sub>2</sub> emissions and provide AWD capability with the additional benefit of improved vehicle stability when compared to traditional mechanical AWD systems.

We have also developed and commercialized a disconnecting AWD system, which strengthens AAM's position as a leader in global technology. AAM's EcoTrac<sup>®</sup> Disconnecting AWD system technology seamlessly engages AWD functionality while improving fuel efficiency and reducing CO<sub>2</sub> emissions. This technology is featured on the newly designed Chevrolet Equinox and GMC Terrain, as well as the AWD Jeep Cherokee and its derivatives.

AAM also develops and manufactures high-efficiency axle systems through the use of proprietary technologies to optimize product design and lubrication management, while significantly reducing friction and improving fuel economy. Our high-efficiency axles are featured on several premium OEM vehicles, including Cadillac, Mercedes-Benz and Jaguar Land Rover.

Through the development of our e-AAM<sup>™</sup> hybrid and electric driveline systems, our EcoTrac<sup>®</sup> Disconnecting AWD system and our high-efficiency axles, we have significantly improved fuel efficiency and safety, ride and handling performance while reducing emissions for our customer's products.

As our customers continue to focus on reducing vehicle weight through the use of aluminum or other conventional means, AAM is well positioned to offer innovative, industry-leading solutions, through proprietary technologies such as Quantum<sup>™</sup> axles, PowerLite<sup>®</sup> axles, PowerDense<sup>®</sup> gears and PowerFilm<sup>®</sup> lubricant.

## Backlog

We typically enter into agreements to provide our products for the life of our customers' vehicle programs. Our new and incremental business includes awarded programs and incremental content and volume including customer requested engineering changes. Our backlog may be impacted by various assumptions, many of which are provided by our customers based on their long range production plans. These assumptions include future production volume estimates, changes in program launch timing and fluctuation in foreign currency exchange rates.

Our gross new and incremental business backlog is approximately \$1.5 billion for programs launching from 2018 to 2020. In 2016, our gross new and incremental business backlog was approximately \$875.0 million for programs launching from 2017 to 2019. The increase in our backlog for 2018 to 2020, as compared to 2017 to 2019 is primarily

the result of our acquisition of MPG.

Of this \$1.5 billion new and incremental business backlog, approximately 40% is for end use markets outside of North America. Light trucks, including crossover vehicles and SUVs, make up approximately 80% of the \$1.5 billion backlog, and approximately 80% of our backlog relates to non-GM business.

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### Patents and Trademarks

We maintain and have pending various U.S. and foreign patents, trademarks and other rights to intellectual property relating to our business, which we believe are appropriate to protect our interest in existing products, new inventions, manufacturing processes and product developments. We do not believe that any single patent or trademark is material to our business nor would expiration or invalidity of any patent or trademark have a material adverse effect on our business or our ability to compete.

### Cyclical and Seasonality

Our operations are cyclical because they are directly related to worldwide automotive production, which is itself cyclical and dependent on general economic conditions and other factors. Our business is moderately seasonal as our major OEM customers historically have an extended shutdown of operations (typically 1-2 weeks) in conjunction with their model year changeover and an approximate one-week shutdown in December. Our major OEM customers also occasionally have longer shutdowns of operations (up to 6 weeks) for program changeovers. Accordingly, our quarterly results may reflect these trends.

### Litigation and Environmental Matters

We are involved in various legal proceedings incidental to our business. Although the outcome of these matters cannot be predicted with certainty, we do not believe that any of these matters, individually or in the aggregate, will have a material adverse effect on our financial condition, results of operations or cash flows.

We are subject to various federal, state, local and foreign environmental and occupational safety and health laws, regulations and ordinances, including those regulating air emissions, water discharge, waste management and environmental cleanup. We will continue to closely monitor our environmental conditions to ensure that we are in compliance with all laws, regulations and ordinances. We have made, and anticipate continuing to make, capital and other expenditures (including recurring administrative costs) to comply with environmental requirements. Such expenditures were not significant in 2017, 2016 and 2015.

On April 6, 2017, we completed our acquisition of MPG. A subsidiary of MPG, Grede Wisconsin Subsidiaries LLC (Grede Wisconsin), had been under investigation by the U.S. Department of Justice and the Environmental Protection Agency for alleged Clean Air Act violations and alleged obstruction of justice relating to the January 2012 removal of debris from the roof of a heat treat oven that was purported to contain asbestos at a now closed Grede facility in Berlin, Wisconsin. The United States Attorney, Eastern District of Wisconsin, indicted Grede LLC and Grede II LLC, the parent company of Grede Wisconsin. During the fourth quarter of 2017, we settled this matter for approximately \$0.5 million.

### Associates

We employ over 25,000 associates on a global basis (including our joint venture affiliates) of which approximately 11,500 are employed in the U.S. and approximately 13,500 are employed at our foreign locations. Approximately 5,000 are salaried associates and approximately 20,000 are hourly associates. Of the 20,000 hourly associates, approximately 60% are covered under collective bargaining agreements with various labor unions.

## Executive Officers of the Registrant

Name	Age	Position
David C. Dauch	53	Chairman of the Board & Chief Executive Officer
Michael K. Simonte	54	President
David E. Barnes	59	Vice President & General Counsel
Timothy E. Bowes	54	President - Casting
David M. Buckley	53	Vice President - Strategic & Business Development
Gregory Deveson	56	President - Powertrain
Terri M. Kemp	52	Vice President - Human Resources
Michael J. Lynch	53	Vice President - Finance & Controller
Christopher J. May	48	Vice President & Chief Financial Officer
Alberto L. Satine	61	President - Driveline
Norman Willemse	61	President - Metal Forming

David C. Dauch, age 53, has been AAM's Chief Executive Officer since September 2012. Mr. Dauch has served on AAM's Board of Directors since April 2009 and was appointed Chairman of the Board in August 2013. From September 2012 through August 2015, Mr. Dauch served as AAM's President & CEO. Prior to that, Mr. Dauch served as President & Chief Operating Officer (2008 - 2012) and held several other positions of increasing responsibility from the time he joined AAM in 1995. Presently, he serves on the boards of Business Leaders for Michigan, the Detroit Economic Club, the Detroit Regional Chamber, the Great Lakes Council Boy Scouts of America, the Boys & Girls Club of Southeast Michigan, the National Association of Manufacturers (NAM), the Original Equipment Suppliers Association (OESA), Amerisure Mutual Holdings, Inc. and the Amerisure Companies (since December 2014) and Horizon Global Corporation (since June 2015). Mr. Dauch also serves on the Miami University Business Advisory Council, the GM Supplier Council and the FCA NAFTA Supplier Advisory Council.

Michael K. Simonte, age 54, has been President since August 2015. Mr. Simonte previously served as Executive Vice President & Chief Financial Officer (since December 2011); Executive Vice President - Finance & Chief Financial Officer (since February 2009); Group Vice President - Finance & Chief Financial Officer (since December 2007); Vice President - Finance & Chief Financial Officer (since January 2006); Vice President & Treasurer (since May 2004); and Treasurer (since September 2002). Mr. Simonte joined AAM in December 1998 as Director, Corporate Finance. Prior to joining our Company, Mr. Simonte served as Senior Manager at the Detroit office of Ernst & Young LLP. Mr. Simonte is a certified public accountant.

David E. Barnes, age 59, has been General Counsel and Corporate Secretary since joining AAM in 2012, and became a Vice President in 2017. In addition to his responsibilities as General Counsel and Corporate Secretary, he also serves as the Chief Compliance Officer of the Company. Prior to joining AAM, Mr. Barnes served as Executive Vice President, General Counsel and Secretary for Atlas Oil Company. He has held various positions during his career at Ford Motor Company, Dykema Gossett and Venture Holdings LLC, after beginning his career at Honigman, Miller, Schwartz and Cohn. Mr. Barnes holds a juris doctor degree.

Timothy E. Bowes, age 54, has been President - Casting since August 2017. Mr. Bowes previously served as Senior Vice President - Strategic & Business Development (since April 2016) and Senior Vice President - Corporate Planning (since December 2015). Prior to joining AAM, Mr. Bowes served as Chief Executive Officer & President of Transtar Corporation, since 2013. Prior to Transtar, Mr. Bowes served as Executive Officer & President - Commercial Truck at Meritor Inc., which he joined in 2005. He has held various leadership positions during his 25-year automotive and industrial career, managing business operations, strategic opportunities and sales & marketing for multiple organizations. In addition to Transtar and Meritor, Mr. Bowes' career also includes working at Hilite International, Wescast Industries, Intermet Corporation and ITT Automotive.

David Buckley, age 53, joined AAM in November 2017 as Vice President - Strategic and Business Development. In this role, Mr. Buckley leads AAM's business development and strategic global growth initiatives. Prior to joining AAM, Mr. Buckley served as President and Chief Executive Officer for Vexos, Inc from 2014 to 2017. Before joining Vexos, Mr. Buckley gained extensive global leadership experience as Chief Executive Officer of Cross Match Technologies, Vectronix and Modtech. Earlier in his career, Mr. Buckley led successful business units at General Electric and PricewaterhouseCoopers consulting. Mr. Buckley is a certified LEAN expert. Mr. Buckley is

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also a veteran of the U.S. Navy, and currently serves on the U.S. Naval Academy admissions board, and as a member of the U.S. Naval Academy Foundation Board.

Gregory Deveson, age 56, joined AAM as President - Powertrain in April 2017. Prior to joining AAM, Mr. Deveson served as Senior Vice President of the Driveline Systems Group at Magna Powertrain from 2008 to 2016. Over his 25-year automotive and manufacturing career, Mr. Deveson has managed business operations, strategic opportunities, product engineering, purchasing and quality for multiple organizations.

Terri M. Kemp, age 52, has been Vice President - Human Resources since September 2012. Prior to that, she served as Executive Director - Human Resources & Labor Relations (since November 2010), Executive Director - Human Resources (since September 2009), Director - Human Resources Operations (since October 2008), and served in various plant and program management roles since joining the Company in July 1996. Prior to joining our Company, Mrs. Kemp served for nine years at Corning Incorporated, where she progressed through a series of manufacturing positions with increasing responsibility, including Industrial Engineer, Department Head and Operations Manager.

Michael J. Lynch, age 53, has been Vice President and Controller since February 2017. Prior to that, he served as Vice President - Driveline Business Performance & Cost Management (since May 2015); Vice President - Finance & Controller (since September 2012); Executive Director & Controller (since October 2008); Director - Commercial Analysis (since July 2006); Director - Finance, Driveline Americas (since March 2006); Director - Investment & Commercial Analysis (since November 2005); Director - Finance, Driveline (since October 2005); Director - Finance Operations, U.S. (since April 2005); Manager - Finance (since June 2003); Manager - Finance, Forge Division (since September 2001); Finance Manager - Albion Automotive (since October 1998); Supervisor - Cost Estimating (since February 1998) and Financial Analyst at the Detroit Manufacturing Facility since joining AAM in September 1996. Prior to joining our Company, Mr. Lynch served at Stellar Engineering for nine years in various capacities.

Christopher J. May, age 48, has been Vice President & Chief Financial Officer since August 2015. Prior to that, he served as Treasurer (since December 2011); Assistant Treasurer (since September 2008); Director of Internal Audit (since September 2005); Divisional Finance Manager - Metal Formed Products (since June 2003); Finance Manager - Three Rivers Manufacturing Facility (since August 2000); Manager, Financial Reporting (since November 1998) and Financial Analyst since joining AAM in 1994. Prior to joining AAM, Mr. May served as a Senior Accountant for Ernst & Young. Mr. May is a certified public accountant.

Alberto L. Satine, age 61, has been President - Driveline since August 2015. Prior to that, he served as Senior Vice President - Global Driveline Operations (since January 2014); Group Vice President - Global Sales & Business Development (since December 2011); Vice President - Strategic & Business Development (since November 2005); Vice President - Procurement (since January 2005); Executive Director, Global Procurement Direct Materials (since January 2004); General Manager, Latin American Driveline Sales and Operations (since August 2003) and General Manager of International Operations (since joining our Company in May 2001). Prior to joining our Company, Mr. Satine held several management positions at Dana Corporation, including the position of Regional President of Dana's Andean Operations in South America from 1997 to 2000 and General Manager of the Spicer Transmission Division in Toledo, Ohio from 1994 to 1997.

Norman Willemse, age 61, has been President - Metal Forming since August 2015. Prior to that, he served as Vice President - Metal Formed Product Business Unit (since December 2011); Vice President - Global Metal Formed Product Business Unit (since October 2008); Vice President - Global Metal Formed Product Operations (since December 2007); General Manager - Metal Formed Products Division (since July 2006) and Managing Director - Albion Automotive (since joining our Company in August 2001). Prior to joining our Company, Mr. Willemse served at ATSAS for seven years as Executive Director Engineering & Commercial and John Deere for over 17 years in various engineering positions of increasing responsibility. Mr. Willemse is a professional certified mechanical engineer.

Internet Website Access to Reports

The website for American Axle & Manufacturing Holdings, Inc. is [www.aam.com](http://www.aam.com). Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to section 13(a) or 15(d) of the Securities Exchange Act of 1934 are available free of charge through our website as soon as reasonably practicable after they are electronically filed with, or furnished to, the

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Securities and Exchange Commission (SEC). The SEC also maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The information contained in the Company's website is not included, or incorporated by reference, in this Annual Report on Form 10-K.

### Financial Information About Segments

We use Segment Adjusted EBITDA as the measure of earnings to assess the performance of each segment and determine the resources to be allocated to the segments. Segment Adjusted EBITDA is defined as earnings before interest expense, income taxes, depreciation and amortization for our reportable segments, excluding the impact of restructuring and acquisition-related costs, debt refinancing and redemption costs and non-recurring items. Refer to Item 7 - Management's Discussion and Analysis for reconciliation of non-GAAP and GAAP information.

Prior to our acquisition of MPG, we did not operate in what are now our Powertrain and Casting segments. The following tables outline our sales, Segment Adjusted EBITDA and total assets for each of our reporting segments as of, and for the years ended December 31, 2017, 2016 and 2015:

#### Year Ended December 31, 2017

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$4,040.8	\$1,242.6	\$816.5	\$676.4	\$—	\$6,776.3
Less: Intersegment sales	1.1	412.6	9.9	86.7	—	510.3
Net external sales	\$4,039.7	\$830.0	\$806.6	\$589.7	\$—	\$6,266.0
Segment adjusted EBITDA	\$692.3	\$232.3	\$131.1	\$47.0	\$—	\$1,102.7
Total Assets	\$2,303.0	\$2,175.3	\$1,824.0	\$984.3	\$596.2	\$7,882.8

#### Year Ended December 31, 2016

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$3,735.6	\$552.2	\$—	—\$	—\$ —	\$4,287.8
Less: Intersegment sales	4.9	334.9	—	—	—	339.8
Net external sales	\$3,730.7	\$217.3	\$—	—\$	—\$ —	\$3,948.0
Segment adjusted EBITDA	\$515.8	\$103.6	\$—	—\$	—\$ —	\$619.4
Total Assets	\$2,183.9	\$410.3	\$—	—\$	—\$ 828.1	\$3,422.3

Year Ended December 31, 2015

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$3,690.0	\$ 560.1	\$ —	—\$	—\$ —	\$4,250.1
Less: Intersegment sales	1.8	345.2	—	—	—	347.0
Net external sales	\$3,688.2	\$ 214.9	\$ —	—\$	—\$ —	\$3,903.1
Segment adjusted EBITDA	\$457.4	\$ 113.7	\$ —	—\$	—\$ —	\$571.1
Total Assets	\$2,059.6	\$ 303.5	\$ —	—\$	—\$ 815.8	\$3,178.9

Assets included in the Corporate and Eliminations column of the tables above represent AAM corporate assets, as well as eliminations of intercompany assets. Refer to Note 14 - Segment and Geographic Information for additional financial detail on our segments.

#### Financial Information About Geographic Areas

International operations are subject to certain additional risks inherent in conducting business outside the U.S., such as changes in currency exchange rates, price and currency exchange controls, import restrictions, nationalization, expropriation and other governmental action. Financial information relating to our operations by geographic area is presented in the following table. Net sales are attributed to countries based upon location of customer. Long-lived assets exclude deferred income taxes.

	December 31,		
	2017	2016	2015
	(in millions)		
Net sales			
United States	\$3,319.4	\$2,147.9	\$2,121.9
Canada	310.1	94.7	119.3
Mexico	1,393.3	1,061.9	1,060.2
South America	161.8	124.6	106.6
China	297.3	203.4	185.5
All other Asia	291.9	208.8	185.2
Europe	480.6	102.8	120.6
Other	11.6	3.9	3.8
Total net sales	\$6,266.0	\$3,948.0	\$3,903.1
Long-lived assets			
United States	\$4,253.8	\$831.0	\$824.0
Mexico	993.8	529.2	522.6
South America	61.4	61.5	48.5
China	180.9	129.8	85.8
All other Asia	103.4	92.0	103.7
Europe	307.4	111.7	120.3
Total long-lived assets	\$5,900.7	\$1,755.2	\$1,704.9



## Item 1A. Risk Factors

The following risk factors and other information included in this Annual Report on Form 10-K should be considered as our business, financial condition, operating results and cash flows could be materially adversely affected if any of the following risks occur.

Our business is significantly dependent on sales to GM and FCA.

We are the principal supplier of driveline components to GM for its full-size RWD light trucks and SUVs manufactured in North America, supplying substantially all of GM's rear axle and 4WD/AWD axle requirements for these vehicle platforms. We also supply GM with various products from each of our Metal Forming, Powertrain and Casting segments. Sales to GM were approximately 47% of our consolidated net sales in 2017, 67% in 2016, and 66% in 2015. A reduction in our sales to GM or a reduction by GM of its production of RWD light trucks or SUVs, as a result of market share losses of GM or otherwise, could have a material adverse effect on our results of operations and financial condition.

We also supply driveline system products for FCA's heavy-duty Ram full-size pickup trucks and its derivatives, the AWD Jeep Cherokee and a passenger car driveshaft program. In addition, we sell various products to FCA from each of our Metal Forming, Powertrain and Casting segments. Sales to FCA accounted for approximately 14% of our consolidated net sales in 2017, 18% in 2016 and 20% in 2015. A reduction in our sales to FCA or a reduction by FCA of its production of the programs we support, as a result of market share losses of FCA or otherwise, could have a material adverse effect on our results of operations and financial condition.

Our business may also be adversely affected by reduced demand for the product programs we currently support, or anticipate supporting in the future, or if we do not obtain sales orders for successor programs that replace our current product programs.

Our business is dependent on the rear-wheel drive light truck and SUV market segments in North America.

A substantial portion of our revenue is derived from products supporting RWD light truck and SUV platforms in North America. Sales and production levels of light trucks and SUVs can be affected by many factors, including changes in consumer demand; product mix shifts favoring other types of light vehicles, such as front-wheel drive based crossover vehicles and passenger cars; fuel prices; and government regulations. A reduction in the market segment we currently supply could have a material adverse impact on our results of operations and financial condition.

We are under continuing pressure from our customers to reduce our prices.

Annual price reductions are a common practice in the automotive industry. The majority of our products are sold under purchase orders pursuant to long-term contracts with prices scheduled at the time the contracts are established. Many of our contracts require us to reduce our prices in subsequent years and most of our contracts allow us to adjust prices for engineering changes. If we must accommodate a customer's demand for higher annual price reductions and are unable to offset the impact of any such price reductions through continued technology improvements, cost reductions or other productivity initiatives, our results of operations and financial condition could be adversely affected.

Our business faces substantial competition.

The automotive industry is highly competitive. Our competitors include manufacturing facilities controlled by OEMs, as well as many other domestic and foreign companies possessing the capability to produce some or all of the products

we supply. In addition to traditional competitors in the automotive sector, the trend towards advanced electronic integration has increased the level of new market entrants, including technology companies. Some of our competitors are affiliated with OEMs and others have economic advantages as compared to our business, such as patents, existing underutilized capacity and lower wage and benefit costs. Technology, design, quality and cost are the primary elements of competition in our industry segment. As a result of these competitive pressures and other industry trends, OEMs and suppliers are developing strategies to reduce costs. These strategies include supply base consolidation, OEM in-sourcing and global sourcing. Our business may be adversely affected by increased competition from suppliers benefiting from OEM affiliate relationships or financial and other resources that we do not

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possess. Our business may also be adversely affected if we do not sustain our ability to meet customer requirements relative to technology, design, quality, delivery and cost.

If we are unable to respond timely to changes in regulation, technology, and market innovation, we risk not being able to develop our intellectual property into commercially viable products.

Our results of operations and financial condition are impacted, in part, by our competitive advantage in developing, engineering, and manufacturing innovative products. In the future, our ability to anticipate changes in technology, successfully develop, engineer, and bring to market new and innovative proprietary products, or successfully respond to evolving business models, will have a significant impact on our market competitiveness. If we are unable to maintain our competitive advantage through innovation, there could be a material adverse effect on our results of operations and financial condition.

Our company's global operations are subject to risks and uncertainties.

We have business and technical offices and manufacturing facilities in multiple countries outside the United States. International operations are subject to certain risks inherent in conducting business outside the U.S., such as changes in currency exchange rates, tax laws, price and currency exchange controls, import restrictions, nationalization, expropriation and other governmental action. Our global operations also may be adversely affected by political events, domestic or international terrorist events and hostilities, natural disasters and significant weather events, or disruptions in the global financial markets. Certain events, such as the United Kingdom's continued efforts to exit the European Union, potential changes in immigration policies, and tax reform, create a level of uncertainty for multi-national companies. As U.S. companies continue to expand globally, increased complexity exists due to recent changes to the U.S. corporate tax code, potential revisions to international tax law treaties, and renegotiated trade deals, including potential changes to the North American Free Trade Agreement (NAFTA). These uncertainties could have a material adverse effect on our business and our results of operations and financial condition. As we continue to expand our business globally, our success will depend, in part, on our ability to anticipate and effectively manage these and other risks.

Our business is dependent on our Guanajuato Manufacturing Complex.

A high concentration of our global business is supported by our Guanajuato Manufacturing Complex (GMC) in Mexico. In 2017, GMC represented nearly 40% of our consolidated net sales, and represented a significant portion of our profitability and cash flow from operations. We expect GMC to continue to represent a substantial portion of these metrics for the foreseeable future. A significant disruption to our GMC operations as a result of changes in trade agreements between Mexico and the U.S. (including NAFTA), tariffs, natural disaster or otherwise could have a material adverse impact on our results of operations and financial condition.

We may be unable to consummate and successfully integrate acquisitions and joint ventures.

Engaging in acquisitions and joint ventures involves potential risks, including financial risks and failure to successfully integrate and realize the expected benefits of such acquisitions and joint ventures. On April 6, 2017, AAM completed our acquisition of 100% of the equity interests of Metaldyne Performance Group Inc. (MPG). Failure to successfully integrate our acquisition of MPG, or to realize the expected benefits and efficiencies of the acquisition, may have a material adverse impact on our results of operations and financial condition. Integrating acquired operations is a significant challenge and there is no assurance that we will be able to manage the integrations successfully.

As we continue to expand globally and accelerate our diversification efforts, we may pursue strategic growth initiatives with greater frequency. An inability to successfully achieve the levels of organic and inorganic growth from



our strategic initiatives could adversely impact our results of operations and financial condition.

A failure of our information technology (IT) networks and systems, or a failure to successfully integrate the IT systems of acquired companies, could adversely impact our business and operations.

We rely upon information technology networks and systems to process, transmit and store electronic information, and to manage or support a variety of business processes or activities. Additionally, we and certain of our third-party vendors collect and store personal information in connection with human resources operations and other aspects of our business. The secure operation of these information technology networks and systems and the

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proper processing and maintenance of this information are critical to our business operations. We cannot be certain that the security measures we have in place to protect these systems and data will be successful or sufficient to protect our IT systems from current and emerging technology threats and damage from computer viruses, unauthorized access, cyber attack and other similar disruptions. The occurrence of any of these events could compromise our networks, and the information stored there could be accessed, publicly disclosed or lost. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability or regulatory penalties under laws protecting the privacy of personal information, the disruption of our operations or damage to our reputation. We may be required to incur significant costs to protect against damage caused by these disruptions or security breaches in the future.

In connection with our recent acquisition of MPG, we have assessed MPG's existing IT systems and infrastructure, and have developed plans for integration, however, there is no assurance we will be able to successfully integrate the MPG IT systems on a timely basis, which could have a material adverse effect on our results of operations and financial condition.

Our business could be adversely affected by the cyclical nature of the automotive industry.

Our operations are cyclical because they are directly related to worldwide automotive production, which is itself cyclical and dependent on general economic conditions and other factors, such as credit availability, interest rates, fuel prices and consumer confidence. Our business may be adversely affected by an economic decline or fiscal crisis that results in a reduction of automotive production and sales by our largest customers.

Negative or unexpected tax consequences, as well as possible changes in foreign and domestic tax laws could adversely affect our results of operations.

On December 22, 2017, the Tax Cuts and Jobs Act (the 2017 Act) was signed into law in the United States. The 2017 Act is expected to result in significant changes to tax regulations in the U.S., and the impacts to our business and future financial results are not fully known. In addition, there have been recent global proposals brought forward by the Organisation for Economic Co-operation and Development (OECD) alongside the Group of Twenty (G-20), for tax jurisdictions to evaluate reforming longstanding corporate tax law principles and treaties that could adversely affect multi-national companies. Although the OECD does not enact tax law, proposals like this or others that lead to substantial changes in enacted tax laws and treaties could have a material adverse impact on our results of operations and financial condition.

We file income tax returns in the U.S. federal jurisdiction, as well as various states and foreign jurisdictions. We are also subject to examinations of these income tax returns by the relevant tax authorities. Based on the status of these audits and the protocol of finalizing audits by the relevant tax authorities, it is not possible to estimate the impact of changes, if any, to previously recorded uncertain tax positions. Any negative or unexpected outcomes of these examinations and audits could have a material adverse impact on our results of operations and financial condition.

We may incur material losses and costs as a result of product recall or field action, product liability and warranty claims, litigation and other disputes and claims.

We are exposed to warranty, product recall or field action and product liability claims in the event that our products fail to perform as expected, and we may be required to participate in a recall of such products. We are not responsible for certain warranty claims that may be incurred by our customers, which include returned components for which no trouble was found upon inspection, discretionary acts of dealer goodwill, defects related to certain directed buy components, and build-to-print design issues. We review warranty claim activity in detail, and we may have disagreements with our customers as to responsibility for these types of costs incurred by our customers. In addition, as we continue to diversify our customer base, we expect our obligation to share in the cost of providing warranties as part of our agreements with new customers will increase. Costs and expenses associated with warranties, field actions, product recalls and product liability claims could have a material adverse impact on our results of operations and financial condition and may differ materially from the estimated liabilities that we have recorded in our consolidated

financial statements.

In addition to warranty claims relating directly to products we produce, potential product recalls for our customers and their other suppliers, and the potential reputational harm that may result from such product recalls, could have a material adverse impact on our results of operations and financial condition.

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We are also involved in various legal proceedings incidental to our business. Although we believe that none of these matters are likely to have a material adverse effect on our results of operations or financial condition, there can be no assurance as to the ultimate outcome of any such legal proceeding or any future legal proceedings.

Our business could be adversely affected by disruptions in our supply chain and our customers' supply chain.

We depend on a limited number of suppliers for certain key components and materials needed for our products. We rely upon, and expect to continue to rely upon, certain suppliers for critical components and materials that are not readily available in sufficient volume from other sources. As we continue to expand our global manufacturing footprint, we may need to rely on suppliers in local markets that have not yet proven their ability to meet our requirements. These supply chain characteristics make us susceptible to supply shortages and price increases. If production volumes increase rapidly, there can be no assurance that the suppliers of critical components and materials will be able or willing to meet our future needs on a timely basis.

Our supply chain, as well as our customers' supply chain, is also at risk of unanticipated events such as natural disasters or changes in governmental regulations and trade agreements (including NAFTA), that could cause a disruption in the supply of critical components to us and our customers. A significant disruption in the supply of these materials could have a material adverse effect on our results of operations and financial condition.

Our company or our customers may not be able to successfully and efficiently manage the timing and costs of new product program launches.

Certain of our customers are preparing to launch new product programs for which we will supply newly developed products and related components. There can be no assurance that we will successfully complete the transition of our manufacturing facilities and resources to support these new product programs or other future product programs on a timely and cost efficient basis. Accordingly, the launch of new product programs may adversely affect production rates or other operational efficiency and profitability measures at our facilities. We may also experience difficulties with the performance of our supply chain on program launches, which could result in our inability to meet our contractual obligations to key customers. Production shortfalls or production delays, if any, could result in our failure to effectively manage our material and freight costs relating to these program launches. In addition, our customers may delay the launch or fail to successfully execute the launch of these new product programs, or any additional future product program for which we will supply products. Our revenues, operating results and financial condition could be adversely impacted if our customers fail to timely launch such programs or if we are unable to manage the timing requirements and costs of new product program launches.

Our company may not realize all of the revenue expected from our new and incremental business backlog.

The realization of incremental revenues from awarded business is inherently subject to a number of risks and uncertainties, including the accuracy of customer estimates relating to the number of vehicles to be produced in new and existing product programs and the timing of such production, as well as the fluctuation in exchange rates for programs sourced in currencies other than our reporting currency. It is also possible that our customers may delay or cancel a product program that has been awarded to us. Our revenues, operating results and financial condition could be adversely affected relative to our current financial plans if we do not realize substantially all the revenue from our new and incremental business backlog.

Exchange rate fluctuations could adversely affect our company's global results of operations and financial condition.

As a result of our international operations, we are exposed to foreign currency risks that arise from our normal business operations, including risks associated with transactions that are denominated in currencies other than our

local functional currencies. Gains and losses resulting from the remeasurement of assets and liabilities in a currency other than the functional currency of our foreign subsidiaries are reported in current period income. In the future, unfavorable changes in exchange rate relationships between the functional currencies of our subsidiaries and their non-functional currency denominated assets and liabilities could have an adverse impact on our results of operations and financial condition. While we use, from time to time, foreign currency forward contracts to help

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mitigate certain of these risks and reduce the effects of fluctuations in exchange rates, our efforts to manage these risks may not be successful.

We are also subject to currency translation risk as we are required to translate the financial statements of our foreign subsidiaries to U.S. dollars. We report the effect of translation for our foreign subsidiaries with a functional currency other than the U.S. dollar as a separate component of stockholders' equity. Unfavorable changes in the exchange rate relationship between the U.S. dollar and the functional currencies of our foreign subsidiaries could have an adverse impact on our results of operations and financial condition.

Our business could be adversely affected by volatility in the price of raw materials.

Worldwide commodity market conditions in recent years have resulted in volatility in the cost of steel and other metallic materials we use in production. During periods of general economic improvement and increases in customer demands, we have seen the cost of steel and metallic materials needed for our products increase. If we are unable to pass such cost increases on to our customers, this could have a material adverse effect on our results of operations and financial condition.

Our business could be adversely affected if we fail to maintain satisfactory labor relations.

A significant portion of our hourly associates worldwide are members of industrial trade unions employed under the terms of collective bargaining agreements. There can be no assurance that future negotiations with our labor unions will be resolved favorably or that we will not experience a work stoppage or disruption that could have a material adverse impact on our results of operations and financial condition. In addition, there can be no assurance that such future negotiations will not result in labor cost increases or other terms and conditions that could adversely affect our results of operations and financial condition or our ability to compete for future business.

We use important intellectual property in our business. If we are unable to protect our intellectual property, or if a third party makes assertions against us or our customers relating to intellectual property rights, our business could be adversely affected.

We own important intellectual property, including patents, trademarks, copyrights and trade secrets, and are involved in numerous licensing arrangements. Our intellectual property plays an important role in maintaining our competitive position in a number of the markets that we serve. Our competitors may develop technologies that are similar to our proprietary technologies or design around the patents we own or license. Further, as we expand our operations in jurisdictions where the protection of intellectual property rights is less robust, the risk of others duplicating our proprietary technologies increases, despite efforts we undertake to protect them. Developments or assertions by or against us relating to intellectual property rights, and any inability to protect these rights, could materially adversely affect our business and our competitive position.

Our company's ability to operate effectively could be impaired if we lose key personnel.

Our success depends, in part, on the efforts of our executive officers and other key associates, such as engineers and global operational leadership. In addition, our future success will depend on, among other factors, our ability to continue to attract and retain qualified personnel, particularly engineers and other employees with critical expertise and skills that support key customers and products. The loss of the services of our executive officers or other key associates, unexpected turnover, or the failure to attract or retain associates, could have a material adverse effect on our results of operations and financial condition.

Our goodwill, other intangible assets, and long-lived assets are at risk of impairment if our business or market conditions indicate that the carrying value of those assets exceeds their fair value.

Accounting principles generally accepted in the United States of America (GAAP) require that companies evaluate the carrying value of goodwill, other intangible assets, and long-lived assets routinely in order to assess whether any indication of asset impairment exists. Goodwill and other indefinite-lived intangible assets are required to be evaluated on an annual basis, while finite-lived intangible assets and long-lived assets should be evaluated only when events and circumstances exist that indicate an asset or group of assets may be impaired.

Our recently completed acquisitions of USM Mexico and MPG significantly increased the value of our goodwill and other intangible assets and resulted in a change to our organizational structure from one reporting unit to

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multiple reporting units. Due to the creation of these multiple reporting units, the threshold for analyzing impairment of goodwill has been reduced from an evaluation of the carrying value of our consolidated operations and its related fair value, to an analysis performed at the reporting unit level. This could potentially provide greater risk that goodwill becomes impaired in future operating periods. Further, the increase to goodwill and other intangible asset balances in connection with these acquisitions provides a greater chance that an impairment of these assets would have a material adverse effect on our results of operations and financial condition.

We incurred substantial indebtedness in connection with financing our acquisition of MPG.

In conjunction with our acquisition of MPG, we incurred substantial indebtedness and related debt service obligations, which could have important consequences, including:

- reduced flexibility in planning for, or reacting to, changes in our business, the competitive environment and the industries in which we operate, and to technological and other changes;
- lowered credit ratings;
- reduced access to capital and increasing borrowing costs generally or for any additional indebtedness to finance future operating and capital expenses and for general corporate purposes;
- reduced funds available for operations, capital expenditures and other activities; and
- competitive disadvantages relative to other companies with lower debt levels.

Our New Senior Secured Credit Facilities, comprised of our Revolving Credit Facility, as well as our Term Loan A Facility and Term Loan B Facility (secured on a first priority basis by all or substantially all of the assets of AAM, Inc., the assets of Holdings and each guarantor's assets), and our senior unsecured notes, contain customary affirmative and negative covenants. These agreements include financial covenants based on total net leverage and cash interest expense coverage ratios and limitations on Holdings, AAM Inc, and their restricted subsidiaries to make certain investments, declare or pay dividends or distributions on capital stock, redeem or repurchase capital stock and certain debt obligations, incur liens, incur indebtedness, or merge, make certain acquisitions or sales of assets. A violation of any of these covenants or agreements could result in a default under these contracts, which could permit the lenders or note holders, as applicable, to accelerate repayment of any borrowings or notes outstanding at that time and levy on the collateral granted in connection with the senior secured credit facilities. A default or acceleration under the senior secured credit facilities or the indentures governing the senior unsecured notes may result in increased capital costs and defaults under our other debt agreements and may adversely affect our ability to operate our business, our subsidiaries' and guarantors' ability to operate their respective businesses and our results of operations and financial condition.

Our company faces substantial pension and other postretirement benefit obligations.

We have significant pension and other postretirement benefit obligations to certain of our associates and retirees. Our ability to satisfy the funding requirements associated with these obligations will depend on our cash flow from operations and our ability to access credit and the capital markets. The funding requirements of these benefit plans, and the related expense reflected in our financial statements, are affected by several factors that are subject to an inherent degree of uncertainty and volatility, including governmental regulation. Key assumptions used to value these benefit obligations and the cost of providing such benefits, funding requirements and expense recognition include the discount rate, the expected long-term rate of return on pension assets, mortality rates and the health care cost trend rate. If the actual trends in these factors are less favorable than our assumptions, this could have an adverse effect on our results of operations and financial condition.

Our business is subject to costs associated with environmental, health and safety regulations.



Our operations are subject to various federal, state, local and foreign laws and regulations governing, among other things, emissions to air, discharge to waters and the generation, handling, storage, transportation, treatment and disposal of waste and other materials. We believe that our operations and facilities have been and are being operated in compliance, in all material respects, with such laws and regulations, many of which provide for substantial fines and criminal sanctions for violations. The operation of our manufacturing facilities entails risks in these areas, however, and there can be no assurance that we will not incur material costs or liabilities. In addition, potentially significant expenditures could be required in order to comply with evolving environmental, health and safety laws, regulations or other pertinent requirements that may be adopted or imposed in the future by governmental authorities.

Our restructuring initiatives may not achieve their intended outcomes.

We have initiated restructuring actions in recent years to reduce cost and realign certain areas of our business and may initiate further restructuring actions in future periods. There can be no assurance that such restructuring initiatives will successfully achieve the intended outcomes, or that the charges related to such initiatives will not have a material adverse effect on our results of operations and financial condition.

Item 1B. Unresolved Staff Comments

None.

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## Item 2. Properties

The table below summarizes our global manufacturing locations, and key administrative locations:

North America		Europe	Asia
United States		Czech Republic	China
Brewton, AL (d)	Litchfield, MI (c)	Oslavany (b)	Changshu (a)
Columbiana, AL (d)	Oxford, MI (b)	Zbysov (b)	Hefei (JV) (a)
Fort Smith, AR (c)	Rochester Hills, MI (e)	England	Huzhou City (JV) (b)
Paris, AR (c)	Royal Oak, MI (b)	Halifax (c)	Shanghai (e)
Subiaco, AR (c)	Southfield, MI (e)	France	Suzhou (c)
Bolingbrook, IL (b)	Three Rivers, MI (a)	Decines (c)	India
Chicago, IL (b)	Troy, MI (b)	Lyon (c)	Chennai (a)
Bluffton, IN (c)	Warren, MI (c)	Germany	Jamshedpur (JV) (c)
Columbus, IN (b)	St. Cloud, MN (d)	Bad Homburg (e)	Pune (a), (e)
Fort Wayne, IN (b)	Biscoe, NC (d)	Nurnberg (b)	South Korea
Fremont, IN (c)	Malvern, OH (b)	Zell (b)	Pyeongtaek (c)
New Castle, IN (d)	Minerva, OH (b)	Poland	Thailand
North Vernon, IN (c)	Twinsburg, OH (c)	Świdnica (a)	Rayong (a)
Remington, IN (b)	Ridgway, PA (c)	Scotland	
Rochester, IN (a)	St. Mary's, PA (c)	Glasgow (a)	
Auburn Hills, MI (b)	Charleston, SC (a)	Spain	
Coldwater, MI (b)	Browntown, WI (d)	Barcelona (c)	
Detroit, MI (e)	Menomonee Falls, WI (d)	Valencia (c)	
Fraser, MI (b)	Reedsburg, WI (d)	Sweden	
Kingsford, MI (d)	Wauwatosa, WI (d)	Trollhättan (a), (e)	
Mexico		South America	
Aguascalientes (c)	Ramos Arizpe (c)	Brazil	
El Carmen (d)	Silao (a), (b)	Araucária (a)	
		Indaiatuba (c)	

(a) Location supports the Driveline segment. (b) Location supports the Metal Forming segment. (c) Location supports the Powertrain segment. (d) Location supports the Casting segment. (e) Administrative, engineering or technical location.

We believe that our property and equipment is properly maintained and in good operating condition. We will continue to evaluate capacity requirements in light of current and projected market conditions. We also intend to continue redeploying assets in order to increase our capacity utilization and reduce future capital expenditures to support program launches.

### Item 3. Legal Proceedings

We are involved in various legal proceedings incidental to our business. Although the outcome of these matters cannot be predicted with certainty, we do not believe that any of these matters, individually or in the aggregate, will have a material effect on our financial condition, results of operations or cash flows.

We are subject to various federal, state, local and foreign environmental and occupational safety and health laws, regulations and ordinances, including those regulating air emissions, water discharge, waste management and environmental cleanup. We closely monitor our environmental conditions to ensure that we are in compliance with applicable laws, regulations and ordinances. We have made, and anticipate continuing to make, capital and other expenditures to comply with environmental requirements, including recurring administrative costs. Such expenditures were not significant in 2017, 2016 and 2015.

On April 6, 2017, we completed our acquisition of MPG. A subsidiary of MPG, Grede Wisconsin Subsidiaries LLC (Grede Wisconsin), had been under investigation by the U.S. Department of Justice and the Environmental Protection Agency for alleged Clean Air Act violations and alleged obstruction of justice relating to the January 2012 removal of debris from the roof of a heat treat oven that was purported to contain asbestos at a now closed Grede facility in Berlin, Wisconsin. The United States Attorney, Eastern District of Wisconsin, indicted Grede LLC and Grede II LLC, the parent company of Grede Wisconsin. During the fourth quarter of 2017, we settled this matter for approximately \$0.5 million.

### Item 4. Mine Safety Disclosures

Not applicable.

## Part II

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

## Market Information

Our common stock, par value \$0.01 per share, is listed for trading on the New York Stock Exchange (NYSE) under the symbol "AXL."

## Stockholders and High and Low Sales Prices

2017	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Full Year
High	\$ 21.20	\$ 17.92	\$ 18.21	\$ 18.94	\$21.20
Low	\$ 18.54	\$ 14.30	\$ 13.59	\$ 16.46	\$13.59
2016					
High	\$ 18.52	\$ 16.97	\$ 18.00	\$ 19.51	\$19.51
Low	\$ 11.75	\$ 13.76	\$ 14.32	\$ 13.45	\$11.75

Prices are the quarterly high and low closing sales prices for our common stock as reported by the NYSE. We had approximately 227 stockholders of record as of February 13, 2018.

## Dividends

We did not declare or pay any cash dividends on our common stock in 2017. Our Credit Agreement associated with our New Senior Secured Credit Facilities that was entered into in connection with our acquisition of MPG, limits our ability to declare or pay dividends or distributions on capital stock.

## Issuer Purchases of Equity Securities

In 2016, AAM's Board of Directors authorized a share repurchase program of up to \$100 million of AAM's common shares through December 31, 2018 as part of AAM's overall capital allocation strategy. The repurchase of shares may be made in the open market or in privately negotiated transactions and will be funded through available cash balances and cash flow from operations. The timing and amount of any share repurchases will be determined based on market and economic conditions, share price, alternative uses of capital and other factors. We did not repurchase any shares under the share repurchase program during 2017. As of December 31, 2017 there was approximately \$98.5 million available for repurchase.

## Securities Authorized for Issuance under Equity Compensation Plans

The information regarding our securities authorized for issuance under equity compensation plans is incorporated by reference from our Proxy Statement.

## Item 6. Selected Financial Data

## FIVE YEAR CONSOLIDATED FINANCIAL SUMMARY

Year Ended December 31,

	2017	2016	2015	2014	2013
	(in millions, except per share data)				
Statement of income data					
Net sales	\$6,266.0	\$3,948.0	\$3,903.1	\$3,696.0	\$3,207.3
Gross profit	1,119.1	726.1	635.4	522.8	478.7
Selling, general and administrative expenses	390.1	314.2	274.1	255.2	238.4
Amortization of intangibles	75.3	5.0	3.2	0.4	0.1
Restructuring and acquisition-related costs	110.7	26.2	—	—	—
Operating income	543.0	380.7	358.1	267.6	240.3
Net interest expense	(192.7 )	(90.5 )	(96.6 )	(97.8 )	(115.3 )
Net income	337.5 (a)(b)	240.7 (a)	235.6 (a)	143.0 (b)	94.5 (c)
Net income attributable to AAM	337.1 (a)(b)	240.7 (a)	235.6 (a)	143.0 (b)	94.5 (c)
Diluted earnings per share	\$3.21	\$3.06	\$3.02	\$1.85	\$1.23
Balance sheet data					
Cash and cash equivalents	\$376.8	\$481.2	\$282.5	\$249.2	\$154.0
Total assets	7,882.8	3,422.3 (d)	3,176.9 (d)	3,214.6 (d)	2,979.6 (d)
Total long-term debt, net	3,969.3	1,400.9	1,375.7	1,504.6	1,537.0
Total AAM stockholders' equity	1,536.0	504.2 (d)	275.7 (d)	87.6 (d)	14.7 (d)
Dividends declared per share	—	—	—	—	—
Statement of cash flows data					
Cash provided by operating activities	\$647.0	\$407.6	\$377.6	\$318.4	\$245.5 (e)
Cash used in investing activities	(1,378.1 )	(227.7 )	(188.1 )	(195.3 )	(213.7 ) (e)
Cash provided by (used in) financing activities	615.6	18.4	(143.6 )	(21.4 )	61.3 (e)
Other data					
Depreciation and amortization	\$428.5	\$201.8	\$198.4	\$199.9	\$177.0
Capital expenditures	477.7	223.0	193.5	206.5	251.9
Acquisition of business, net of cash acquired	895.5	5.6	—	—	—
Proceeds from government grants	—	2.8	5.1	2.1	—
Purchase buyouts of leased equipment	13.3	4.6	—	—	—
Proceeds from sale-leaseback of equipment	—	—	—	—	24.1

For 2017, these amounts include acquisition and integration related charges of \$56.0 million, net of tax, asset impairment and plant closure costs of \$2.3 million, net of tax, and implementation costs, including professional (a) expenses, relating to restructuring of \$9.0 million, net of tax. For 2016, these amounts include acquisition and integration related charges of \$7.1 million, net of tax, asset impairment and plant closure costs of \$4.7 million and implementation costs, including professional expenses, relating to restructuring of \$6.6 million, net of tax.

(b) Includes charges of \$2.3 million, net of tax, in 2017, \$0.5 million, net of tax, in 2015 and \$35.1 million, net of tax, in 2013 related to debt refinancing and redemption costs.

(c) Includes a settlement charge of \$23.1 million, net of tax, related to our terminated vested lump-sum pension payout in the U.S.

(d) Each of these amounts have been adjusted by \$25.8 million, net of tax, related to the retrospective application of our change in accounting principle for indirect inventory, which was effective in the second quarter of 2017, as described in Item 8. Financial Statements and Supplementary Data - Note 1 - Organization and Summary of Significant Accounting Policies.

(e) These amounts have been adjusted to reflect the impact of retrospectively adopting the cash flow classification guidance in Accounting Standards Update 2016-15. In 2013, we made cash payments of \$27.5 million for redemption premiums, tender premiums and professional fees associated with the repayment of our remaining 9.25% Notes and 7.875% Notes. These cash payments were classified within operating activities in 2013 and the table above reflects reclassification of these payments to financing activities as required by ASU 2016-15. Also in 2013, we received \$5.0 million as the beneficiary of a key man life insurance policy upon the passing of our Co-Founder and former Executive Chairman of the Board of Directors. This cash receipt was classified within operating activities in 2013 and the table above reflects reclassification of the cash receipt to investing activities as required by ASU 2016-15.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A)

COMPANY OVERVIEW

On April 6, 2017, Alpha SPV I, Inc., a wholly-owned subsidiary of American Axle & Manufacturing Holdings, Inc. (Holdings), merged with and into Metaldyne Performance Group Inc. (MPG), with MPG as the surviving corporation in the merger. Upon completion of the merger, MPG became a wholly-owned subsidiary of Holdings. As a result, we are now a global Tier I supplier to the automotive, commercial and industrial markets. We design, engineer, validate and manufacture driveline, metal forming, powertrain and casting products, employing over 25,000 associates, operating at more than 90 facilities in 17 countries, to support our customers on global and regional platforms with a continued focus on delivering operational excellence, technology leadership and quality.

We are the principal supplier of driveline components to General Motors Company (GM) for its full-size rear-wheel drive (RWD) light trucks and SUVs manufactured in North America, supplying substantially all of GM's rear axle and four-wheel drive and all-wheel drive (4WD/AWD) axle requirements for these vehicle platforms. We also supply GM with various products from our Metal Forming and Powertrain segments. Sales to GM were approximately 47% of our consolidated net sales in 2017, 67% in 2016, and 66% in 2015.

We are also a supplier to GM for certain axles and other driveline products for the life of each GM vehicle program covered by Lifetime Program Contracts and Long Term Program Contracts (collectively, LPCs). Substantially all of our sales to GM are made under purchase orders pursuant to the LPCs. The LPCs have terms equal to the lives of the relevant vehicle programs or their respective derivatives, which typically run five to seven years, and require us to remain competitive with respect to technology, design, quality and cost.

We also supply driveline system products for FCA US LLC (FCA) for heavy-duty Ram full-size pickup trucks and its derivatives, the AWD Jeep Cherokee, and a passenger car driveshaft program. In addition, we sell various products to FCA from each our Metal Forming, Powertrain and Casting segments. Sales to FCA were approximately 14% of our consolidated net sales in 2017, 18% in 2016 and 20% in 2015.

In addition to GM and FCA, we are a supplier to several major automotive Original Equipment Manufacturers (OEMs) and Tier I suppliers. Our consolidated net sales to customers other than GM were \$3,334.6 million in 2017 as compared to \$1,287.8 million in 2016 and \$1,317.1 million in 2015.

Our acquisition of MPG has significantly increased the diversification in our product portfolio, and has accelerated customer diversification initiatives. As a result of our acquisition of MPG, sales to GM and FCA as a percentage of consolidated net sales has been reduced.

INDUSTRY TRENDS

There are a number of significant trends affecting the highly competitive global automotive industry. Intense competition, volatility in fuel, steel, metallic and other commodity prices and significant pricing pressures remain. At the same time, the industry is focused on investing in future products that will incorporate the latest technology and meet changing customer demands. The continued advancement of technology and product innovation, as well as the capability to source programs on a global basis, are critical to attracting and retaining business in the global automotive industry.

**INCREASED DEMAND FOR FUEL EFFICIENCY AND EMISSIONS REDUCTIONS** There has been an increased demand for technologies designed to help reduce emissions, increase fuel economy and minimize the environmental impact of vehicles. As a result, OEMs and suppliers are competing to develop and market new and alternative technologies, such as electric vehicles, hybrid vehicles, fuel cells, and fuel-efficient engines. At the same time, OEMs



and suppliers are improving products to increase fuel economy and reduce emissions through lightweighting and efficiency initiatives.

We are responding with ongoing research and development (R&D) efforts that focus on fuel economy, emissions reductions and environmental improvements by integrating electronics and technology. Through the development of our EcoTrac<sup>®</sup> Disconnecting AWD system, e-AAM<sup>™</sup> hybrid and electric driveline systems, Quantum<sup>™</sup> lightweight axle technology, high-efficiency axles, PowerLite<sup>®</sup> axles and PowerDense<sup>®</sup> gears, high strength connecting rod technology and refined vibration control systems, forged axle tubes, and high strength

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ductile iron Ductile - ITE™, we have significantly advanced our efforts to improve fuel efficiency, safety, and ride and handling performance while reducing emissions and mass. These efforts have led to new business awards and further position us to compete in the global marketplace.

In addition to AAM's organic growth in technology and processes, our acquisition of MPG has provided us with complementary technologies, expanded our product portfolio, significantly diversified our global customer base, and strengthened our long-term financial profile through greater scale. The anticipated synergies of this acquisition are expected to enhance AAM's ability to compete in today's technological and regulatory environment, while remaining cost competitive through increased scale and integration.

**EVOLUTION OF THE AUTOMOTIVE INDUSTRY AS DEMAND FOR CAR-SHARING, RIDE-SHARING AND AUTONOMOUS VEHICLES INCREASES** OEMs are increasingly focused on offering their own car-sharing rental businesses and ride-sharing services, in addition to selling vehicles. Car-sharing typically allows consumers to rent a car for a short period of time, while ride-sharing matches people to available carpools or other services that provide on-demand rides with the use of an online application. With continued urbanization, population growth and increased government regulations to ease congestion, it is expected that the markets for these services will continue to grow. As such, many OEMs are exploring and expanding their own car-sharing and ride-sharing efforts.

Another trend developing is the expectation that autonomous, self-driving cars will become more common with continued advancements in technology. Autonomous vehicles present many possible benefits, such as a reduction in deadly traffic collisions caused by human error and reduced traffic congestion, but there are also foreseeable challenges such as liability for damage and software reliability. The increased integration of electronics that will likely be required in autonomous vehicle developments will provide an opportunity for suppliers, such as AAM, with advanced capabilities in this area to be competitive in this expanding market.

**INCREASE IN DEMAND FOR ELECTRONIC INTEGRATION** The electronic content of vehicles continues to expand, largely driven by consumer demand for greater vehicle performance, enhanced functionality, and affordable convenience options. As electronic components become an increasingly larger focus for OEMs and suppliers, the industry will likely continue to see the addition of new market entrants from non-traditional automotive companies, including increased competition from technology companies. An area of focus will be the product development cycle and bridging the gap between the shorter development cycles of IT hardware and software and the longer development cycles of traditional powertrain components. AAM's product portfolio, including e-AAM™ hybrid and electric driveline systems, EcoTrac® Disconnecting AWD system, VecTrac™ Torque Vectoring Technology and TracR® Differential Technology, are examples of AAM's enhanced capabilities in electronic integration.

**GLOBAL AUTOMOTIVE PRODUCTION AND INDUSTRY CONSOLIDATION** Asia and Eastern Europe continue to be an area of focus for automotive capital investment as well as strategic regions for innovation and new product development. As our customers design their products for global markets, they will continue to require global support from their suppliers. For this reason, it is critical that suppliers maintain a global presence in these markets in order to compete for new contracts. As a result of our acquisition of MPG, we have expanded our global presence, primarily in Europe and Asia. We also have engineering offices around the world to support our global locations and provide technical solutions to our customers on a regional basis.

The cyclical nature of the automotive industry, volatile commodity prices, the shifting demands of consumer preference, regulatory requirements and trade agreements require OEMs and suppliers to remain agile with regard to product development and global capability. A critical objective for OEMs and suppliers will be the ability to meet these global demands while effectively managing costs. OEMs and suppliers are preparing for these challenges through merger and acquisition activity, development of strategic partnerships and reduction of vehicle platform complexity. In order to effectively drive technology development, recognize cost synergies, and increase global footprint, the industry may continue to see consolidation in the supply base as companies recognize and respond to the

need for scalability. Our acquisition of MPG is a critical step in achieving the aforementioned objectives.

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## RESULTS OF OPERATIONS

**NET SALES** Net sales increased to \$6,266.0 million in 2017 as compared to \$3,948.0 million in 2016 and \$3,903.1 million in 2015. The impact of our acquisition of MPG on net sales in 2017 was approximately \$2,022 million. Excluding the impact of our acquisition of MPG, our sales in 2017, as compared to 2016, reflect an increase in production volumes for the light truck and SUV programs we currently support, as well as the impact of program launches from our new business backlog and an increase in metal market pass-throughs to our customers, partially offset by the impact of annual productivity price-downs for certain programs.

The increase in sales in 2016, as compared to 2015, primarily reflects an increase of approximately 8% in production volumes for the North American light truck and SUV programs we currently support, which was partially offset by a reduction of approximately \$51.0 million in commercial vehicle sales due to an expired program and reductions in both metal market pass-throughs to our customers and the impact of foreign exchange related to translation adjustments.

**COST OF GOODS SOLD** Cost of goods sold was \$5,146.9 million in 2017 as compared to \$3,221.9 million in 2016 and \$3,267.7 million in 2015. The impact on cost of goods sold of our acquisition of MPG was approximately \$1,739 million in 2017, which includes \$24.9 million for the step-up of inventory to fair value as a result of purchase accounting. Excluding the impact of our acquisition of MPG, the change in cost of goods sold principally reflects approximately \$120 million related to increased production volumes and an increase of approximately \$75 million related to metal market pass-through costs, partially offset by approximately \$12 million associated with lower net manufacturing costs, including the impact of foreign exchange, and productivity initiatives. The change in cost of goods sold also reflects approximately \$22 million related to the positive impact of vertically integrating our supply chain realized as a result of our acquisition of USM Mexico Manufacturing LLC (USM Mexico) in the first quarter of 2017.

The change in cost of goods sold in 2016, as compared to 2015, reflects a net reduction of approximately \$6.0 million related to an increase in sales volumes and a product mix change in 2016, as compared to 2015, that was more than offset by the impact of lower net manufacturing costs, including the impact of foreign exchange, lower warranty expense, and productivity initiatives. Cost of goods sold was also impacted by a reduction of approximately \$39.0 million related to metal market pass-through costs and foreign exchange related to translation adjustments.

Materials costs as a percentage of total cost of goods sold were approximately 62% in 2017, and 68% in both 2016 and 2015.

**GROSS PROFIT** Gross profit increased to \$1,119.1 million in 2017 as compared to \$726.1 million in 2016 and \$635.4 million in 2015. Gross margin was 17.9% in 2017 as compared to 18.4% in 2016 and 16.3% in 2015. The impact of our acquisition of MPG on gross profit in 2017 was approximately \$283 million. Excluding the impact of our acquisition of MPG, the change in gross profit in 2017 as compared to 2016, and the change in gross profit in 2016 as compared to 2015, reflect the benefit of increased contribution margin on higher production volumes for the light truck and SUV programs that we support.

Gross profit and gross margin were also impacted by the other factors discussed in Net Sales and Cost of Goods Sold above.

**SELLING, GENERAL AND ADMINISTRATIVE EXPENSES (SG&A)** SG&A (including R&D) was \$390.1 million in 2017 as compared to \$314.2 million in 2016 and \$274.1 million in 2015. SG&A as a percentage of net sales was 6.2% in 2017, 8.0% in 2016 and 7.0% in 2015. R&D spending was \$161.5 million in 2017 as compared to \$139.8 million in 2016 and \$113.9 million in 2015. The change in SG&A in 2017, as compared to 2016, is primarily due to an increase of approximately \$90 million associated with our acquisition of MPG. SG&A expense also reflects the

increase in R&D spending in 2017 as compared to 2016, which was partially offset by the achievement of synergies associated with our restructuring actions initiated in 2016 and as a result of our acquisition of MPG.

The change in SG&A in 2016 as compared to 2015 was primarily due to higher R&D expense and higher incentive compensation accruals.

**AMORTIZATION OF INTANGIBLE ASSETS** As a result of our acquisitions of USM Mexico on March 1, 2017 and MPG on April 6, 2017, we recognized \$1,254.8 million of intangible assets. Amortization expense for the year ended December 31, 2017 was \$75.3 million as compared to \$5.0 million and \$3.2 million for the years ended December 31, 2016 and December 31, 2015, respectively. The increase in amortization expense was attributable to the increase in intangible assets as a result of these acquisitions.

**RESTRUCTURING AND ACQUISITION-RELATED COSTS** In 2016, AAM initiated actions under a global restructuring program focused on creating a more streamlined organization in addition to reducing our cost structure and preparing for upcoming acquisition and integration activities. Restructuring and acquisition-related costs were \$110.7 million in 2017, \$26.2 million in 2016, and we did not incur any such costs in 2015. We incurred severance charges of approximately \$2.0 million, as well as implementation costs, including professional expenses, of approximately \$13.9 million during 2017. During the fourth quarter of 2017, we recorded a \$1.5 million asset impairment charge related to the pending closure of one of our manufacturing facilities.

In 2016, we incurred severance charges of approximately \$0.6 million, as well as other implementation costs, including professional fees, of approximately \$10.2 million, and asset impairment charges of \$4.5 million primarily related to the announced closure of a manufacturing facility in India.

Since inception of the global restructuring program, we have incurred severance charges totaling \$2.6 million, implementation costs totaling \$24.1 million, and asset impairment changes totaling \$6.0 million. We expect to incur \$10 to \$20 million of additional charges under our global restructuring program in 2018.

On March 1, 2017, we completed our acquisition of 100% of USM Mexico, and on April 6, 2017, we completed our acquisition of 100% of the equity interests of MPG. During 2017 we incurred \$40.7 million of acquisition-related costs, acquisition-related severance costs charges of \$7.2 million, and \$45.4 million of integration expenses associated with these acquisitions. Acquisition-related costs primarily consist of advisory, legal, accounting, valuation and certain other professional or consulting fees incurred. Also included in acquisition-related costs is a one-time charge of approximately \$20 million for MPG stock-based compensation that was accelerated and settled as a result of the acquisition. Integration expenses reflect costs incurred for information technology systems, ongoing operational activities, and consulting fees incurred in conjunction with the acquisitions. We expect to incur additional integration charges of approximately \$40 to \$55 million in 2018, primarily in conjunction with our acquisition of MPG.

**OPERATING INCOME** Operating income increased to \$543.0 million in 2017 as compared to \$380.7 million in 2016 and \$358.1 million in 2015. Operating margin was 8.7% in 2017 as compared to 9.6% in 2016 and 9.2% in 2015. The changes in operating income and operating margin in 2017, 2016 and 2015 were due to the factors discussed in Net Sales, Cost of Goods Sold, Gross Profit, SG&A, Amortization of Intangible Assets and Restructuring and Acquisition-Related Costs above.

**INTEREST EXPENSE** Interest expense was \$195.6 million in 2017, \$93.4 million in 2016 and \$99.2 million in 2015. The increase in interest expense in 2017, as compared to 2016, primarily reflects interest expense incurred on borrowings under our New Senior Secured Credit Facilities on April 6, 2017 (as defined and described in the Liquidity and Capital Resources in this MD&A), as well as on \$700.0 million aggregate principal amount of 6.25% senior notes and \$500.0 million in aggregate principal amount of 6.50% senior notes (the Notes), which were issued on March 23, 2017 as part of the MPG acquisition. We expect our interest expense, including the borrowings under our New Senior Secured Credit Facilities and the issuance of the Notes, to be approximately \$225 million on an annual basis.

The weighted-average interest rate of our total debt outstanding was 5.8% in 2017, 6.6% in 2016 and 6.3% in 2015.

**INVESTMENT INCOME** Investment income was \$2.9 million in 2017 and 2016, and \$2.6 million in 2015. Investment income includes interest earned on cash and cash equivalents during the period.

**OTHER INCOME (EXPENSE)** Following are the components of Other Income (Expense) for 2017, 2016 and 2015:

**Debt refinancing and redemption costs** In 2017, we expensed \$2.7 million of prepayment premiums related to the extinguishment of MPG's existing debt at the date of the acquisition and \$0.8 million for the write-off of the remaining unamortized debt issuance costs related to our 5.125% Notes that were redeemed in the fourth quarter of 2017. There were no such costs in 2016, and in 2015, we expensed \$0.8 million of unamortized debt issuance costs related to a voluntary election to prepay our outstanding term facility.

**Other, net** Other, net, which includes the net effect of foreign exchange gains and losses and our proportionate share of earnings from equity in unconsolidated subsidiaries, was expense of \$6.8 million in 2017, compared to income of \$8.8 million in 2016, and income of \$12.0 million in 2015. The change in other, net primarily relates to foreign exchange remeasurement losses as a result of the U.S. dollar weakening against the Mexican Peso and Euro.

**INCOME TAX EXPENSE** Income tax expense was \$2.5 million in 2017, \$58.3 million in 2016, and \$37.1 million in 2015. Our effective income tax rate was 0.7% in 2017 as compared to 19.5% in 2016 and 13.6% in 2015.

Our income tax expense and effective income tax rate for 2017 were lower than our income tax expense and effective income tax rate for 2016 as a result of an increase in the proportionate share of earnings attributable to lower tax rate jurisdictions. In addition, subsequent to the acquisition of MPG, we re-evaluated our valuation allowance position with regard to jurisdictions in which consolidated state tax returns are filed and recorded an income tax benefit for the year ended December 31, 2017. This was partially offset by a discrete tax adjustment related to certain non-deductible transaction and acquisition-related costs.

Further, we recognized a net benefit in 2017 related to accounting for the following provisions of the Tax Cuts and Jobs Act: 1) remeasurement of our net deferred tax liabilities in the U.S. from 35% to 21%; and 2) a one-time transition tax on certain foreign earnings for which U.S. tax was previously deferred, which also resulted in a benefit related to the reduction of a previously recorded deferred tax liability on these foreign earnings.

Our effective income tax rate for 2016 was higher than our effective income tax rate for 2015 primarily due to the impact of an \$11.5 million reduction in income tax expense related to uncertain tax positions attributable to transfer pricing in the fourth quarter of 2015.

Our income tax expense and effective income tax rate for 2017, 2016 and 2015, as compared to the U.S. federal statutory rate of 35%, also reflect favorable foreign tax rates, partially offset by our inability to realize a tax benefit for current foreign losses.

**NET INCOME ATTRIBUTABLE TO AAM AND EARNINGS PER SHARE (EPS)** Net income attributable to AAM was \$337.1 million in 2017 as compared to \$240.7 million in 2016 and \$235.6 million in 2015. Diluted earnings per share was \$3.21 in 2017 as compared to \$3.06 per share in 2016 and \$3.02 per share in 2015. Primarily as a result of the issuance of AAM common shares in conjunction with our acquisition of MPG, our EPS denominator increased by approximately 26 million shares for 2017 compared to 2016. Net Income and EPS were primarily impacted by the factors discussed in Net Sales, Cost of Goods Sold, SG&A, Amortization of Intangible Assets, Restructuring and Acquisition-Related Costs, Other Income (Expense) and Income Tax Expense above, as well as the issuance of the additional shares.



## SEGMENT REPORTING

Prior to our acquisition of MPG on April 6, 2017, we operated in one reportable segment: the manufacture, engineer, design and validation of driveline systems and related components and chassis modules for light trucks, sport utility vehicles (SUVs), crossover vehicles, passenger cars and commercial vehicles. Subsequent to our acquisition of MPG, our business was organized into four operating segments, each representing a reportable segment under ASC 280 Segment Reporting. The four segments are Driveline, Metal Forming, Powertrain and Casting.

The following tables outline our sales and Segment Adjusted EBITDA for each of our reporting segments for the years ended December 31, 2017, 2016 and 2015:

## Year Ended December 31, 2017

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$4,040.8	\$1,242.6	\$ 816.5	\$ 676.4	\$	—\$6,776.3
Less: Intersegment sales	1.1	412.6	9.9	86.7	—	510.3
Net external sales	\$4,039.7	\$ 830.0	\$ 806.6	\$ 589.7	\$	—\$6,266.0
Segment adjusted EBITDA	\$692.3	\$ 232.3	\$ 131.1	\$ 47.0	\$	—\$1,102.7

## Year Ended December 31, 2016

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$3,735.6	\$ 552.2	\$	—\$	—\$	—\$4,287.8
Less: Intersegment sales	4.9	334.9	—	—	—	339.8
Net external sales	\$3,730.7	\$ 217.3	\$	—\$	—\$	—\$3,948.0
Segment adjusted EBITDA	\$515.8	\$ 103.6	\$	—\$	—\$	—\$619.4

## Year Ended December 31, 2015

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$3,690.0	\$ 560.1	\$	—\$	—\$	—\$4,250.1
Less: Intersegment sales	1.8	345.2	—	—	—	347.0
Net external sales	\$3,688.2	\$ 214.9	\$	—\$	—\$	—\$3,903.1
Segment adjusted EBITDA	\$457.4	\$ 113.7	\$	—\$	—\$	—\$571.1

The increase in Driveline sales for the year ended December 31, 2017, as compared to the year ended December 31, 2016, primarily reflect the impact of program launches from our new business backlog, as well as an increase in metal market pass-throughs to our customers, which was partially offset by the impact of annual productivity price-downs for certain programs. Driveline sales for the year ended December 31, 2017 were also positively impacted by increased production volumes on the light truck and SUV programs we currently support.

The increase in Driveline sales in 2016, as compared to 2015, primarily reflects an increase of approximately 8% in production volumes for the North American light truck and SUV programs we supported, which was partially

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offset by a reduction of approximately \$51.0 million in commercial vehicle sales due to an expired program, and reductions in both metal market pass-throughs to our customers and the impact of foreign exchange related to translation adjustments.

The increase in net sales in our Metal Forming segment for the year ended December 31, 2017, as compared to the year ended December 31, 2016, was primarily attributable to the purchase of MPG.

For year ended December 31, 2017, the increase in sales in both the Powertrain and Casting segments, as compared to the years ended December 31, 2016 and December 31, 2015, was entirely attributable to our acquisition of MPG as AAM did not operate in these segments prior to the acquisition.

We use Segment Adjusted EBITDA as the measure of earnings to assess the performance of each segment and determine the resources to be allocated to the segments. For the year ended December 31, 2017, as compared to the year ended December 31, 2016, the increase in Segment Adjusted EBITDA for the Driveline segment was primarily attributable to contribution margin on increased volumes for light truck and SUV programs we currently support, as well as the impact of productivity initiatives and the reorganization to four reportable segments subsequent to our acquisition of MPG. The positive impact of these factors was partially offset by an increase in metal market pass-through costs.

For the year ended December 31, 2016, as compared to the year ended December 31, 2015, the increase in Segment Adjusted EBITDA for the Driveline segment was attributable to the benefit of increased contribution margin on higher production volumes for the North American light truck and SUV programs that we support, which was partially offset by an increase in R&D spending and higher incentive compensation accruals.

Metal Forming experienced an increase in Segment Adjusted EBITDA for the year ended December 31, 2017, as compared to the year ended December 31, 2016, primarily attributable to our acquisition of MPG.

For the year ended December 31, 2017, the increase in Segment Adjusted EBITDA in both the Powertrain and Casting segments, as compared to the years ended December 31, 2016 and December 31, 2015, was entirely attributable to our acquisition of MPG as AAM did not operate in these segments prior to our acquisition.

#### Reconciliation of Non-GAAP and GAAP Information

In addition to results reported in accordance with accounting principles generally accepted in the United States of America (GAAP) in this MD&A, we have provided certain non-GAAP financial measures such as EBITDA and Segment Adjusted EBITDA. Such information is reconciled to its closest GAAP measure in accordance with Securities and Exchange Commission rules below.

We define EBITDA to be earnings before interest expense, income taxes, depreciation and amortization. Segment Adjusted EBITDA is defined as EBITDA excluding the impact of restructuring and acquisition-related costs, debt refinancing and redemption costs, and non-recurring items. We believe that EBITDA is a meaningful measure of performance as it is commonly utilized by management and investors to analyze operating performance and entity valuation. Our management, the investment community and the banking institutions routinely use EBITDA, together with other measures, to measure our operating performance relative to other Tier 1 automotive suppliers. We believe that Segment Adjusted EBITDA is a meaningful measure as it is used to assess business and operating performance of the segments, and for operational planning and decision-making purposes. Non-GAAP financial measures are not and should not be considered a substitute for any GAAP measure. Additionally, non-GAAP financial measures as presented by AAM may not be comparable to similarly titled measures reported by other companies.



	Year Ended December 31,		
	2017	2016	2015
Net income	\$337.5	\$240.7	\$235.6
Interest expense	195.6	93.4	99.2
Income tax expense	2.5	58.3	37.1
Depreciation and amortization	428.5	201.8	198.4
EBITDA	\$964.1	\$594.2	\$570.3
Restructuring and acquisition-related costs	110.7	26.2	—
Debt refinancing and redemption costs	3.5	—	0.8
Non-recurring items:			
Pension settlement	3.2	—	—
Acquisition-related fair value inventory adjustment	24.9	—	—
Impact of change in accounting principle	(3.7 )	—	—
Other non-recurring items	—	(1.0 )	—
Segment Adjusted EBITDA	\$1,102.7	\$619.4	\$571.1

## LIQUIDITY AND CAPITAL RESOURCES

Our primary liquidity needs are to fund debt service obligations, capital expenditures and working capital requirements, in addition to advancing our strategic initiatives. We believe that operating cash flow, available cash and cash equivalent balances and available committed borrowing capacity under our New Senior Secured Credit Facilities (as defined below) will be sufficient to meet these needs.

**OPERATING ACTIVITIES** Net cash provided by operating activities increased to \$647.0 million in 2017 as compared to \$407.6 million in 2016 and \$377.6 million in 2015. The following factors impacted cash provided by operating activities:

**Net income and non-cash charges** Net income increased to \$337.5 million in 2017, as compared to \$240.7 million in 2016. This was despite an increase in non-cash charges, primarily depreciation and amortization. Depreciation and amortization was \$428.5 million in 2017 as compared to \$201.8 million in 2016. This was primarily related to increases in property, plant and equipment and intangible asset balances in 2017 as a result of our acquisitions of MPG and USM Mexico.

**Restructuring and Acquisition-Related Costs** We incurred \$110.7 million and \$26.2 million of charges related to restructuring and acquisition-related costs in 2017 and 2016, respectively, and a significant portion of these charges were cash charges. In 2018, we expect to incur \$10 to \$20 million of cash charges under our global restructuring program, as well as acquisition and integration related cash charges of approximately \$40 to \$55 million primarily related to further integrating the MPG business.

**Interest paid** Interest paid in 2017 was \$182.7 million as compared to \$87.2 million in 2016 and \$93.8 million in 2015. The increase in interest paid in 2017, as compared to 2016, primarily relates to the additional indebtedness incurred in connection with our acquisition of MPG. The decrease in interest paid in 2016, as compared to 2015, was the result of a decrease in our outstanding borrowings.

**Pension and Other Postretirement Benefits (OPEB)** We contributed \$1.1 million to our pension trusts in 2017. In 2015, we voluntarily contributed \$18.3 million to one of our U.K. pension trusts to substantially satisfy our estimated U.K. regulatory funding requirements for 2016 through 2018. Due to the availability of our pre-funded pension balances (previous contributions in excess of prior required pension contributions) related to certain of our U.S. pension plans, we expect our regulatory pension funding requirements in 2018 to be approximately \$2 million.

Our cash payments for OPEB, net of GM cost sharing, were \$12.5 million in 2017, \$17.0 million in 2016, and \$14.2 million in 2015. This compares to our annual postretirement cost of \$11.5 million in 2017, \$12.1 million in 2016, and \$13.5 million in 2015. We expect our cash payments for other postretirement benefit obligations in 2018, net of GM cost sharing, to be approximately \$17 million.

**Deferred revenue** At December 31, 2017 and 2016, we had deferred revenue of \$34.1 million and \$24.6 million, respectively, classified as a current liability and \$78.8 million and \$70.8 million, respectively, classified as a noncurrent liability in our Consolidated Balance Sheets. These amounts were primarily related to cash receipts from customers for various settlements and commercial agreements that are associated with a future benefit to these customers. In 2016, we reached an agreement with a customer to increase installed capacity for a program we support. We received \$5.0 million in 2017 and \$20.0 million in 2016 related to this agreement.

**Accounts payable** As a result of our acquisitions in 2017, we settled accounts payable balances with USM Mexico and MPG totaling approximately \$35 million, which was reflected as a reduction of cash flow from operating activities in our Consolidated Statement of Cash Flows for 2017. See Note 3 - Business Combinations for further detail.

We experienced a decrease in our year-end 2016 accounts payable balance, as compared to our year-end 2015 accounts payable balance, which was primarily due to a reduction in inventory levels and the timing of payments made to suppliers.

**Income taxes** Based on the status of audits, and the protocol of finalizing audits by the relevant tax authorities, it is not possible to estimate the timing or impact of changes, if any, to previously recorded uncertain tax positions. As of December 31, 2017 and December 31, 2016, we have recorded a liability for unrecognized income tax benefits and related interest and penalties of \$55.2 million and \$30.7 million, respectively. In January 2016, we completed negotiations with the Mexican tax authorities to settle 2007 through 2009 transfer pricing audits. We made a payment of \$22.9 million in January 2016 that fully satisfied our obligations for transfer pricing issues for tax years 2007 through 2013. Including these settlements, we made payments of approximately \$28 million in 2016 to the Mexican tax authorities related to transfer pricing matters.

Although it is difficult to estimate with certainty the amount of our tax liabilities for the years that remain subject to audit, we do not expect the settlements will be materially different from what we have recorded in unrecognized tax benefits. We will continue to monitor the progress and conclusions of current and future audits and will adjust our estimated liability as necessary.

**Inventories** We experienced a decrease in inventory at December 31, 2016, as compared to December 31, 2015, primarily resulting from the impact of inventory reduction initiatives, as well as the reduction of inventory at certain facilities as a result of expiring programs.

**INVESTING ACTIVITIES** On March 1, 2017, we completed our acquisition of 100% of USM Mexico and on April 6, 2017, we completed our acquisition of 100% of the equity interests of Metaldyne Performance Group, Inc. (MPG). We acquired USM Mexico for a purchase price of \$144.1 million, net of cash acquired, which was funded with available cash. The purchase price for MPG was approximately \$1.5 billion, which included a cash portion of approximately \$750 million, net of cash acquired. Under the terms of the MPG Merger Agreement, each share of MPG's common stock was converted into the right to receive \$13.50 per share in cash and 0.5 of a share of AAM common stock.

Capital expenditures were \$477.7 million in 2017, \$223.0 million in 2016 and \$193.5 million in 2015. Our capital spending primarily supported our significant global program launches within our new and incremental business backlog.

We expect our capital spending in 2018 to be in the range of 8% of sales, which includes support for our global program launches in 2018 and 2019 within our new and incremental business backlog, as well as program capacity increases and future launches of replacement programs.

During 2017, we executed early buyout options to purchase certain leased equipment in the amount of \$13.3 million as compared to \$4.6 million in 2016.

We received proceeds of \$2.8 million and \$5.1 million in 2016 and 2015, respectively, related to a European Union government incentive for capital expenditures related to new technology.

**FINANCING ACTIVITIES** Net cash provided by financing activities was \$615.6 million in 2017, compared to net cash provided by financing activities of \$18.4 million in 2016, and net cash used in financing activities of \$143.6 million in 2015. Total debt outstanding, net of debt issuance costs, was \$3,975.2 million at year-end 2017, \$1,404.2



million at year-end 2016 and \$1,379.0 million at year-end 2015. The increase in total debt outstanding, net of issuance costs, at year-end 2017, as compared to year-end 2016 was primarily due to new borrowings as part of our acquisition of MPG, as well as other factors noted below.

**New Senior Secured Credit Facilities** In connection with our acquisition of MPG (the Acquisition) on April 6, 2017, Holdings and American Axle & Manufacturing, Inc. (AAM, Inc.) entered into a credit agreement (the Credit Agreement), among AAM, Inc., as borrower, Holdings, each financial institution party thereto as a lender (the Lenders) and administrative agent, pursuant to which Holdings and certain of its restricted subsidiaries (including certain subsidiaries of MPG acquired as part of the Acquisition) are required to guarantee the borrowings of AAM, Inc. thereunder and Holdings, AAM, Inc. and certain of their restricted subsidiaries are required to pledge their assets (including, without limitation, after-acquired assets), subject to certain exceptions and limitations. In connection with the Credit Agreement, Holdings, AAM, Inc. and certain of their restricted subsidiaries entered into a Collateral Agreement and Guarantee Agreement with the financial institutions party thereto as collateral agent and administrative agent.

Pursuant to the Credit Agreement, the Lenders agreed to provide a \$100.0 million term loan A facility (the Term Loan A Facility), a \$1.55 billion term loan B facility (the Term Loan B Facility) and a \$900 million multi-currency revolving credit facility (the Revolving Credit Facility, and together with the Term Loan A Facility and the Term Loan B Facility, the New Senior Secured Credit Facilities). The proceeds of the Term Loan A Facility and the Term Loan B Facility were used to finance a portion of the consideration for the Acquisition, pay transaction costs, redeem in full MPG Holdco I Inc.'s 7.375% Senior Notes due 2022, and repay the existing indebtedness of AAM, Inc. under its Amended and Restated Credit Agreement, dated as of January 9, 2004, amended and restated as of September 13, 2013 and as further amended, among AAM, Inc., as borrower, Holdings, and each financial institution party thereto as a lender and administrative agent, as well as repay existing indebtedness of MPG under its Credit Agreement, dated as of October 20, 2014 and as amended as of May 8, 2015, among MPG Holdco I Inc., as guarantor, MPG, the subsidiary guarantors party thereto, and each financial institution party thereto as a lender and administrative agent. The proceeds of the Revolving Credit Facility will be used for general corporate purposes. We incurred debt issuance costs of \$54 million in 2017 related to the New Senior Secured Credit Facilities.

The Term Loan A Facility and the Revolving Credit Facility will mature on April 6, 2022, and the Term Loan B Facility will mature on April 6, 2024. Borrowings under the New Senior Secured Credit Facilities bear interest at rates based on the applicable Eurodollar rate or alternate base rate, as AAM may elect, in each case plus an applicable margin determined based on AAM's total net leverage ratio. The alternate base rate is the greatest of (a) the prime rate of a major United States financial institution, (b) the Federal Reserve Bank of New York rate plus 0.50% and (c) the adjusted Eurodollar rate plus 1.00%. The applicable margin for Eurodollar-based loans under the New Senior Secured Credit Facilities will be between 1.25% and 2.25% with respect to any loan under the Term Loan A Facility, 2.25% with respect to any loan under the Term Loan B Facility, and between 2.00% and 3.00% with respect to any loan under the Revolving Credit Facility. The applicable margin for loans subject to alternate base rate will be between 0.25% and 1.25% with respect to any loan under the Term Loan A Facility, 1.25% with respect to any loan under the Term Loan B Facility, and between 1.00% and 2.00% with respect to any loan under the Revolving Credit Facility.

The Credit Agreement requires certain mandatory prepayments of outstanding loans under the Term Loan A Facility and the Term Loan B Facility, subject to certain exceptions, based on a percentage of the annual excess cash flow of Holdings and its restricted subsidiaries (with step-downs to 0% based upon the total net leverage ratio, and with no prepayment required if annual excess cash flow is under a specified minimum threshold), the net cash proceeds of certain asset sales and casualty and condemnation events, subject to reinvestment rights and certain other exceptions, and the net cash proceeds of any issuance of debt not otherwise permitted under the Credit Agreement.

The Credit Agreement permits AAM, Inc. to incur incremental term loan borrowings and/or increase commitments under the Revolving Credit Facility, subject to certain limitations and the satisfaction of certain conditions, in an

aggregate amount not to exceed (i) \$600 million, plus (ii) certain voluntary prepayments, plus (iii) additional amounts subject to pro forma compliance with a first lien net leverage ratio for Holdings and its restricted subsidiaries.

The Credit Agreement contains customary affirmative and negative covenants, including, among others, financial covenants based on total net leverage and cash interest expense coverage ratios and limitations on the ability of Holdings, AAM, Inc. or their restricted subsidiaries to make certain investments, declare or pay dividends

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or distributions on capital stock, redeem or repurchase capital stock and certain debt obligations, incur liens, incur indebtedness, or merge, make certain acquisitions or certain sales of assets. The Credit Agreement includes customary events of default, the occurrence of which would permit the lenders to, among other things, declare the principal, accrued interest and other obligations to be immediately due and payable. Upon such default, the lenders may also seek customary remedies with respect to the collateral under the Collateral Agreement.

As of December 31, 2017, we have prepaid \$5.0 million of the outstanding principal on our Term Loan A Facility and \$15.5 million of the outstanding principal on our Term Loan B Facility. These payments satisfy our obligation for principal payments under the Term Loan A Facility and Term Loan B Facility for the next four quarters. As a result, there are no amounts related to the Term Loan A Facility or Term Loan B Facility in the Current portion of long-term debt line item in our Consolidated Balance Sheet as of December 31, 2017.

At December 31, 2017, we had \$866.2 million available under the Revolving Credit Facility. This availability reflects a reduction of \$33.8 million for standby letters of credit issued against the facility.

The New Senior Secured Credit Facilities provide back-up liquidity for our foreign credit facilities. We intend to use the availability of long-term financing under the New Senior Secured Credit Facilities to refinance any current maturities related to such debt agreements that are not otherwise refinanced on a long-term basis in their local markets, except where otherwise reclassified to current portion of long-term debt on our Consolidated Balance Sheet.

**6.25% Notes due 2025 and 6.50% Notes due 2027** On March 23, 2017, we issued \$700.0 million in aggregate principal amount of 6.25% senior notes due 2025 (6.25% Notes due 2025) and \$500.0 million in aggregate principal amount of 6.50% senior notes due 2027 (6.50% Notes). Proceeds from the Notes were used primarily to fund the cash consideration related to our acquisition of MPG, related fees and expenses, refinance certain existing indebtedness of MPG and borrowings under our previous revolving credit facility, which has been replaced by our new Revolving Credit Facility, together with borrowings under the New Senior Secured Credit Facilities. We incurred debt issuance costs of \$37.2 million in 2017 related to the 6.25% Notes due 2025 and 6.50% Notes.

**5.125% Notes due 2019** In 2013, we issued \$200.0 million of 5.125% senior unsecured notes due 2019 (5.125% Notes). Pursuant to the terms of our 5.125% Notes, in the fourth quarter of 2017, we voluntarily redeemed the full amount of the 5.125% Notes. We expensed \$0.8 million in the fourth quarter of 2017 for the write-off of the remaining unamortized debt issuance costs that we had been amortizing over the expected life of the borrowing.

**Foreign credit facilities** We utilize local currency credit facilities to finance the operations of certain foreign subsidiaries. At December 31, 2017, \$53.2 million was outstanding under our foreign credit facilities and an additional \$159.7 million was available. We increased our foreign credit capacity in 2017 to support our global operations, primarily in Mexico and China. At December 31, 2016, \$60.4 million was outstanding under our foreign credit facilities and an additional \$62.0 million was available.

**Repayment of MPG Indebtedness** Upon our acquisition of MPG, we assumed approximately \$1.9 billion of existing MPG indebtedness, which we repaid in its entirety on the date of acquisition. This indebtedness was comprised of approximately \$0.2 billion of a Euro denominated term loan, approximately \$1.0 billion of a U.S. dollar denominated term loan and approximately \$0.7 billion of outstanding MPG bonds. Upon settlement of the debt, we paid approximately \$24.6 million of accrued interest. In addition, we also incurred and paid approximately \$2.7 million of fees, which have been presented in the Debt refinancing and redemption costs line item within our Consolidated Statement of Income for the year ended December 31, 2017.

**Treasury stock** Treasury stock increased by \$7.0 million in 2017 to \$198.1 million as compared to \$191.1 million at year-end 2016, due to the withholding and repurchase of shares of AAM stock to satisfy employee tax withholding obligations as part of the merger consideration paid for our acquisition of MPG, as well as tax withholding obligations

due upon the vesting of performance shares and restricted stock units.

Credit ratings To access public debt capital markets, the Company relies on credit rating agencies to assign short-term and long-term credit ratings to our securities as an indicator of credit quality for fixed income investors. A credit rating agency may change or withdraw its ratings based on its assessment of our current and future ability to meet interest and principal repayment obligations. Credit ratings affect our cost of borrowing under our revolving

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credit facility and may affect our access to debt capital markets and other costs to fund our business. The credit ratings and outlook currently assigned to our securities by the rating agencies are as follows:

	Corporate Family Rating	Senior Unsecured Notes Rating	Senior Secured Notes Rating	Outlook
Standard & Poor's	BB-	B	BB	Stable
Moody's Investors Services	B1	B2	Ba2	Stable
Fitch Ratings	BB-	BB-	BB+	Stable

Dividend program We have not declared or paid any cash dividends on our common stock in 2017, 2016 or 2015.

Off-balance sheet arrangements Our off-balance sheet financing relates principally to operating leases for machinery and equipment, commercial office and production facilities, vehicles and other assets with various expiration dates.

Contractual obligations The following table summarizes payments due on our contractual obligations as of December 31, 2017:

	Payments due by period				
	Total	<1yr	1-3 yrs	3-5 yrs	>5 yrs
	(in millions)				
Current and long-term debt	\$4,022.5	\$50.5	\$252.4	\$1,054.8	\$2,664.8
Interest obligations	1,125.7	225.5	428.0	352.7	119.5
Capital lease obligations	28.3	1.7	1.6	1.9	23.1
Operating leases (1)	115.9	26.3	38.2	22.0	29.4
Purchase obligations (2)	356.4	320.8	35.6	—	—
Other long-term liabilities (3)	679.8	65.6	156.2	132.0	326.0
Total	\$6,328.6	\$690.4	\$912.0	\$1,563.4	\$3,162.8

Operating leases include all lease payments through the end of the contractual lease terms, which includes elections (1) for repurchase options. These commitments include machinery and equipment, commercial office and production facilities, vehicles and other assets.

(2) Purchase obligations represent our obligated purchase commitments for capital expenditures and related project expense.

Other long-term liabilities primarily represent our estimated pension and other postretirement benefit obligations, (3) net of GM cost sharing, that were actuarially determined through 2026, as well as our unrecognized income tax benefits.

## CYCLICALITY AND SEASONALITY

Our operations are cyclical because they are directly related to worldwide automotive production, which is itself cyclical and dependent on general economic conditions and other factors. Our business is moderately seasonal as our major OEM customers historically have an extended shutdown of operations (typically 1-2 weeks) in conjunction with their model year changeover and an approximate one-week shutdown in December. Our major OEM customers also occasionally have longer shutdowns of operations (up to 6 weeks) for program changeovers. Accordingly, our quarterly results may reflect these trends.

## LEGAL PROCEEDINGS

We are involved in various legal proceedings incidental to our business. Although the outcome of these matters cannot be predicted with certainty, we do not believe that any of these matters, individually or in the aggregate, will have a material adverse effect on our financial condition, results of operations or cash flows.

We are subject to various federal, state, local and foreign environmental and occupational safety and health laws, regulations and ordinances, including those regulating air emissions, water discharge, waste management and environmental cleanup. We closely monitor our environmental conditions to ensure that we are in compliance with applicable laws, regulations and ordinances. We have made, and anticipate continuing to make, capital and other expenditures, including recurring administrative costs, to comply with environmental requirements. Such expenditures were not significant in 2017, 2016 and 2015.

On April 6, 2017, we completed our acquisition of MPG. A subsidiary of MPG, Grede Wisconsin Subsidiaries LLC (Grede Wisconsin), had been under investigation by the U.S. Department of Justice and the Environmental Protection Agency for alleged Clean Air Act violations and alleged obstruction of justice relating to the January 2012 removal of debris from the roof of a heat treat oven that was purported to contain asbestos at a now closed Grede facility in Berlin, Wisconsin. The United States Attorney, Eastern District of Wisconsin, indicted Grede LLC and Grede II LLC, the parent company of Grede Wisconsin. During the fourth quarter of 2017, we settled this matter for approximately \$0.5 million.

## EFFECT OF NEW ACCOUNTING STANDARDS

### Accounting Standards Update 2017-12

On August 28, 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2017-12 - Targeted Improvements to Accounting for Hedging Activities (Topic 815). ASU 2017-12 is intended to better align the risk management activities of a company with the company's financial reporting for hedging relationships. This guidance expands and refines several aspects of hedge accounting. The most applicable changes to AAM as a result of the new guidance are as follows: 1) the concept of risk component hedging is introduced in ASU 2017-12, which could allow us to hedge contractually specified components in a contract; 2) the guidance now allows entities to utilize a 31-day period in assessing whether the critical terms of a forecasted transaction match the maturity of the hedging derivative, which could allow for expanded use of hedging instruments for certain sales and purchases; and 3) we may now qualitatively assess hedge effectiveness on a quarterly basis when the facts and circumstances related to the hedging relationship have not changed significantly. This guidance becomes effective at the beginning of our 2019 fiscal year, however early adoption is permitted, and we have adopted this guidance effective January 1, 2018. The adoption of this guidance will not have any impact on the measurement or presentation of our existing hedging relationships.

### Accounting Standards Update 2017-07

On March 10, 2017, the FASB issued ASU 2017-07 - Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. The amendments in this update require that an employer disaggregate the service cost component from the other components of defined benefit pension cost and postretirement benefit cost (net benefit cost). Subsequent to the adoption of this guidance, only the service cost component of net benefit cost will be included in the subtotal operating income in our Consolidated Statements of Income and only the service cost component will be eligible for capitalization. This guidance became effective at the beginning of our 2018 fiscal year and requires a retrospective transition method for the income statement classification of the net benefit cost components and a prospective

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transition method for the capitalization of the service cost component in assets. The adoption of this guidance is not expected to have a material impact on our consolidated financial statements.

#### Accounting Standards Update 2017-04

On January 26, 2017, the FASB issued ASU 2017-04 - Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. The amendments in this update modify the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination, or what is referred to under existing guidance as "Step 2." Instead, under the amendments in this update, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. This guidance becomes effective at the beginning of our 2020 fiscal year and early adoption is permitted. The guidance requires a prospective transition method. We do not expect the adoption of this guidance to have a material effect on our consolidated financial statements, however, goodwill could be more susceptible to impairment in periods subsequent to adoption.

#### Accounting Standards Update 2016-16

On October 24, 2016, the FASB issued Accounting Standards Update (ASU) 2016-16 - Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. Existing income tax guidance prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. This existing guidance is deemed an exception to the principle of comprehensive recognition of current and deferred income taxes under accounting principles generally accepted in the United States of America (GAAP). Due to the limited authoritative guidance about this exception, diversity in practice exists. ASU 2016-16 eliminates this exception for intra-entity transfers of assets other than inventory and requires that entities recognize the income tax consequences when the transfers occur. This guidance was effective January 1, 2018 and requires a modified retrospective transition method. The adoption of this guidance did not have a significant impact on our consolidated financial statements.

#### Accounting Standards Update 2016-02

On February 25, 2016, the FASB issued ASU 2016-02 - Leases (Topic 842), and has subsequently issued ASU 2017-13 - Revenue Recognition (Topic 605), Revenue from Contracts with Customers (Topic 606), Leases (Topic 840) and Leases (Topic 842) (collectively the Lease ASUs) which supersede the existing lease accounting guidance and establish new criteria for recognizing lease assets and liabilities. The most significant impact of the updates, to AAM, is that a lessee will be required to recognize a "right-of-use" asset and lease liability for operating lease agreements that were not previously included on the balance sheet under the existing lease guidance. A lessee will be permitted to make a policy election, excluding recognition of the right-of-use asset and associated liability for lease terms of 12 months or less. Expense recognition in the statement of income along with cash flow statement classification for both financing (capital) and operating leases under the new standard will not be significantly changed from existing lease guidance. This guidance becomes effective for AAM at the beginning of our 2019 fiscal year and requires transition under a modified retrospective method. We are currently assessing the impact that this standard will have on our consolidated financial statements.

#### Accounting Standards Update 2014-09



In 2014, the FASB issued ASU 2014-09 - Revenue from Contracts with Customers (Topic 606), and has subsequently issued ASUs 2015-14 - Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, 2016-08 - Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross Versus Net), 2016-10 - Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, 2016-12 - Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients, 2016-20 - Revenue from Contracts with Customers (Topic 606): Technical Corrections and Improvements to Topic 606 and 2017-13 - Revenue Recognition (Topic 605), Revenue

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from Contracts with Customers (Topic 606), Leases (Topic 840) and Leases (Topic 842) (collectively, the Revenue Recognition ASUs).

The Revenue Recognition ASUs outline a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersede most current revenue recognition guidance, including industry-specific guidance. The guidance is based on the principle that an entity should recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. This guidance became effective for AAM on January 1, 2018 and we have adopted this guidance using the modified retrospective approach.

We have evaluated each of the five steps in the new revenue recognition model, which are as follows: 1) Identify the contract with the customer; 2) Identify the performance obligations in the contract; 3) Determine the transaction price; 4) Allocate the transaction price to the performance obligations; and 5) Recognize revenue when (or as) performance obligations are satisfied. We do not expect the impact of implementing the Revenue Recognition ASUs to be material to our financial statements, nor do we expect our method and timing for recognizing revenue subsequent to the implementation of the Revenue Recognition ASUs to vary significantly from our revenue recognition practices under current GAAP.

There are also certain considerations related to internal control over financial reporting that are associated with implementing the new guidance under Topic 606 and we have designed and implemented the necessary changes to our control framework for the new guidance. Specifically, disclosure requirements under the new guidance in Topic 606 have been significantly expanded in comparison to the disclosure requirements under the current guidance. We have completed our assessment of the new disclosure requirements and are completing the process of drafting our disclosures for both interim and annual periods under Topic 606.

#### CRITICAL ACCOUNTING ESTIMATES

In order to prepare consolidated financial statements in conformity with GAAP, we are required to make estimates and assumptions that affect the reported amounts and disclosures in our consolidated financial statements. These estimates are subject to an inherent degree of uncertainty and actual results could differ from our estimates.

Other items in our consolidated financial statements require estimation. In our judgment, they are not as critical as those disclosed below. We have discussed and reviewed our critical accounting estimates disclosure with the Audit Committee of our Board of Directors.

**ACCOUNTING FOR ACQUISITIONS** On March 1, 2017, we completed our acquisition of 100% of USM Mexico and on April 6, 2017, AAM completed our acquisition of 100% of the equity interests of MPG. Upon successful consummation of these acquisitions, we were subject to the accounting guidance as prescribed by ASC 805 - Business Combinations. We were required to allocate the purchase price of the acquired businesses to the identifiable assets and liabilities based on fair value. The excess purchase price over the fair value of identifiable assets and liabilities was recorded as goodwill. Determining the fair values of assets acquired and liabilities assumed, especially with regard to intangible assets, requires significant levels of estimates and assumptions made by management. In order to assist management, we utilized third party valuation experts in determining the fair values.

**PENSION AND OTHER POSTRETIREMENT BENEFITS** In calculating our assets, liabilities and expenses related to pension and OPEB, key assumptions include the discount rate, expected long-term rates of return on plan assets, mortality projections and rates of increase in health care costs.

The discount rates used in the valuation of our U.S. pension and OPEB obligations were based on an actuarial review of a hypothetical portfolio of long-term, high quality corporate bonds matched against the expected payment stream for each of our plans. In 2017, the weighted-average discount rates determined on that basis were 3.65% for both the valuation of our pension benefit obligations and our OPEB obligations. The discount rate used in the valuation of our United Kingdom (U.K.) pension obligations were based on hypothetical yield curves developed from corporate bond yield information within each regional market. In 2017, the weighted-average discount rates

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determined on that basis were 2.75% for our U.K. plans. The expected weighted-average long-term rates of return on our plan assets were 7.45% for our U.S. plans, and 5.10% for our U.K. plans in 2017. We developed these rates of return assumptions based on future capital market expectations for the asset classes represented within our portfolio and a review of long-term historical returns. The asset allocation for our plans was developed in consideration of the demographics of the plan participants and expected payment stream of the liability. Our investment policy allocates approximately 30-65% of the U.S. plans' assets to equity securities, depending on the plan, with the remainder invested in fixed income securities, hedge fund investments and cash. The rates of increase in health care costs are based on current market conditions, inflationary expectations and historical information.

All of our assumptions were developed in consultation with our actuarial service providers. While we believe that we have selected reasonable assumptions for the valuation of our pension and OPEB obligations at year-end 2017, actual trends could result in materially different valuations.

The effect on our pension plans of a 0.5% decrease in both the discount rate and expected return on assets is shown below as of December 31, 2017, our valuation date.

	Expected Return Discount on Rate Assets (in millions)
Decline in funded status	\$59.0 N/A
Increase in 2017 expense	\$1.1 \$ 3.1

No changes in benefit levels or in the amortization of gains or losses have been assumed.

For 2018, we assumed a weighted-average annual increase in the per-capita cost of covered health care benefits of 7.00% for OPEB. The rate is assumed to decrease gradually to 5.0% by 2026 and remain at that level thereafter. A 0.5% decrease in the discount rate for our OPEB would have decreased total expense in 2017 and increased the postretirement obligation, net of GM cost sharing, at December 31, 2017 by \$0.6 million and \$22.5 million, respectively. A 1.0% increase in the assumed health care trend rate would have increased total service and interest cost in 2017 and the postretirement obligation, net of GM cost sharing, at December 31, 2017 by \$1.4 million and \$38.2 million, respectively.

AAM and GM share in the cost of OPEB for eligible retirees proportionally based on the length of service an employee had with AAM and GM. We estimate the future cost sharing payments and present it as an asset on our Consolidated Balance Sheet. As of December 31, 2017, we estimated \$265.5 million in future GM cost sharing. If, in the future, GM were unable to fulfill this financial obligation, our OPEB obligations could be different than our current estimates.

**PRODUCT WARRANTY** We record a liability and related charge to cost of goods sold for estimated warranty obligations at the dates our products are sold or when specific warranty issues are identified. Product warranties not expected to be paid within one year are recorded as a noncurrent liability on our Consolidated Balance Sheet. Our estimated warranty obligations for products sold are based on significant management estimates, with input from our warranty, sales, engineering, quality and legal departments. For products and customers with actual warranty payment experience, we estimate warranty costs principally based on past claims history. For certain products and customers, actual warranty payment experience does not exist or is not mature. In these cases, we estimate our costs based on the contractual arrangements with our customers, existing customers' warranty program terms and internal and external warranty data, which includes a determination of our responsibility for potential warranty issues or claims and estimates of repair costs. We actively study trends of our warranty claims and take action to improve product quality

and minimize warranty claims. We continuously evaluate these estimates and our customers' administration of their warranty programs. We closely monitor actual warranty claim data and adjust the liability, as necessary, on a quarterly basis.

In addition to our ordinary warranty provisions with our customers, we may be responsible for certain costs associated with product recalls and field actions, which are recorded at the time our obligation is probable and can be reasonably estimated.

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Our warranty accrual was \$49.5 million as of December 31, 2017 and \$42.9 million as of December 31, 2016. During 2017 and 2016, we made adjustments to our warranty accrual to reflect revised estimates regarding our projected future warranty obligations. Actual experience could differ from the amounts estimated requiring adjustments to these liabilities in future periods. It is possible that changes in our assumptions or future warranty issues could materially affect our financial position and results of operations.

**VALUATION OF DEFERRED TAX ASSETS AND OTHER TAX LIABILITIES** Because we operate in many different geographic locations, including several foreign, state and local tax jurisdictions, the evaluation of our ability to use all recognized deferred tax assets is complex.

We are required to estimate whether recoverability of our deferred tax assets is "more likely than not," based on forecasts of taxable income in the related tax jurisdictions. In these estimates, we use historical results, projected future operating results based upon approved business plans, eligible carryforward periods, tax planning opportunities and other relevant considerations. This includes the consideration of tax law changes, prior profitability performance and the uncertainty of future projected profitability.

As of December 31, 2017, we have a valuation allowance of approximately \$180.4 million related to net deferred tax assets in several foreign jurisdictions and U.S. state and local jurisdictions. As of December 31, 2016 and 2015, our valuation allowance was \$164.8 million and \$167.3 million, respectively.

If, in the future, we generate taxable income on a sustained basis in foreign and U.S. state jurisdictions for which we have recorded valuation allowances, our current estimate of the recoverability of our deferred tax assets could change and result in the future reversal of some or all of the valuation allowance. While we believe we have made appropriate valuations of our deferred tax assets, unforeseen changes in tax legislation, regulatory activities, audit results, operating results, financing strategies, organization structure and other related matters may result in material changes in our deferred tax asset valuation allowances or our tax liabilities.

We record uncertain tax positions on the basis of a two-step process whereby: (1) we determine whether it is "more likely than not" that the tax positions will be sustained based on the technical merits of the position; and (2) for those positions that meet the "more likely than not" recognition threshold, we recognize the largest amount of tax benefit that is greater than 50% likely to be realized upon ultimate settlement with the related tax authority. We record interest and penalties on uncertain tax positions in income tax expense (benefit).

As of December 31, 2017, 2016 and 2015, we had a liability for unrecognized income tax benefits and related interest and penalties of \$55.2 million, \$30.7 million and \$48.5 million, respectively. In January 2016, we completed negotiations with the Mexican tax authorities to settle 2007 through 2009 transfer pricing audits. We made a payment of \$22.9 million in January 2016 that fully satisfied our obligations for transfer pricing issues for tax years 2007 through 2013. Including these settlements, we made payments of \$28 million in 2016 to the Mexican tax authorities related to transfer pricing matters. Based on the status of the Internal Revenue Service (IRS) audits and audits outside the U.S., and the protocol of finalizing audits by the relevant tax authorities, it is not possible to estimate the impact of changes, if any, to previously recorded uncertain tax positions. Although it is difficult to estimate with certainty the amount of an audit settlement, we do not expect the settlement amounts will be materially different from what we have recorded. We will continue to monitor the progress and conclusions of all ongoing audits and will adjust our estimated liability as necessary.

**GOODWILL** We record goodwill when the purchase price of acquired businesses exceeds the value of their identifiable net tangible and intangible assets acquired. We periodically evaluate goodwill for impairment in accordance with the accounting guidance for goodwill and other indefinite-lived intangibles that are not amortized. We review our goodwill for impairment annually during the fourth quarter. In addition, we review goodwill for impairment whenever adverse events or changes in circumstances indicate a possible impairment.

This review utilizes a two-step impairment test which is performed at the reporting unit level. The first step involves a comparison of the fair value of the reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill of the reporting unit is not considered impaired and thus the second step of the impairment test is unnecessary. If the carrying amount of the reporting unit exceeds its fair value, the second step of the process involves a measurement and comparison of the fair value of goodwill with its carrying amount. If the carrying amount of the reporting unit's goodwill exceeds the fair value of that goodwill, an impairment loss is recognized in an amount equal to the excess.

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Subsequent to our acquisition of MPG, our business was organized into four business units: Driveline, Metal Forming, Powertrain, and Casting. Under the goodwill guidance, we determined that each of our business units represents a reporting unit. The determination of our reporting units and impairment indicators require us to make significant judgments. We utilize a third-party valuation specialist to assist management in determining the fair value of our reporting units for purposes of testing recoverability. We performed our annual impairment test in the fourth quarter and determined there was no impairment to goodwill in 2017 for any of our four reporting units.

**IMPAIRMENT OF LONG-LIVED ASSETS** Long-lived assets, excluding goodwill and other indefinite-lived intangible assets, to be held and used are reviewed for impairment whenever adverse events or changes in circumstances indicate a possible impairment. Recoverability of each “held for use” asset group affected by impairment indicators is determined by comparing the forecasted undiscounted cash flows of the operations to which the assets relate to their carrying amount. If the carrying amount of an asset group exceeds the undiscounted cash flows and is therefore nonrecoverable, the assets in this group are written down to their estimated fair value. We estimate fair value based on market prices, when available, or on a discounted cash flow analysis. Long-lived assets held for sale are recorded at the lower of their carrying amount or fair value less cost to sell. Significant judgments and estimates used by management when evaluating long-lived assets for impairment include:

- An assessment as to whether an adverse event or circumstance has triggered the need for an impairment review;
- Determination of asset groups, the primary asset within each group, and the primary asset's average estimated useful life;
- Undiscounted future cash flows generated by the assets; and
- Determination of fair value when an impairment is deemed to exist, which may require assumptions related to future general economic conditions, future expected production volumes, product pricing and cost estimates, working capital and capital investment requirements, discount rates and estimated liquidation values.



## Forward-Looking Statements

In this MD&A and elsewhere in this Form 10-K (Annual Report), we make statements concerning our expectations, beliefs, plans, objectives, goals, strategies, and future events or performance. Such statements are “forward-looking” statements within the meaning of the Private Securities Litigation Reform Act of 1995 and relate to trends and events that may affect our future financial position and operating results. The terms such as “will,” “may,” “could,” “would,” “plan,” “believe,” “expect,” “anticipate,” “intend,” “project,” “target,” and similar words or expressions, as well as statements in future tense, are intended to identify forward-looking statements.

Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by, which such performance or results will be achieved. Forward-looking statements are based on information available at the time those statements are made and/or management’s good faith belief as of that time with respect to future events and are subject to risks and may differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause such differences include, but are not limited to:

- reduced purchases of our products by General Motors Company (GM), FCA US LLC (FCA), or other customers;
- reduced demand for our customers’ products (particularly light trucks and sport utility vehicles (SUVs) produced by GM and FCA);
- our ability to respond to changes in technology, increased competition or pricing pressures;
- our ability to develop and produce new products that reflect market demand;
- lower-than-anticipated market acceptance of new or existing products;
- our ability to attract new customers and programs for new products;
- risks inherent in our global operations (including adverse changes in trade agreements, such as NAFTA, tariffs, immigration policies, political stability, taxes and other law changes, potential disruptions of production and supply, and currency rate fluctuations);
- a significant disruption in operations at one or more of our key manufacturing facilities;
- global economic conditions;
- our ability to successfully integrate the business and information systems of Metaldyne Performance Group, Inc. (MPG) and to realize the anticipated benefits of the merger;
- risks related to disruptions to ongoing business operations as a result of the merger with MPG, including disruptions to management time;
- risks related to a failure of our information technology systems and networks, and risks associated with current and emerging technology threats and damage from computer viruses, unauthorized access, cyber attack and other similar disruptions;
- negative or unexpected tax consequences;
- liabilities arising from warranty claims, product recall or field actions, product liability and legal proceedings to which we are or may become a party, or the impact of product recall or field actions on our customers;
- our ability to achieve the level of cost reductions required to sustain global cost competitiveness;
  - supply shortages or price increases in raw materials, utilities or other operating supplies for us or our customers as a result of natural disasters or otherwise;
- our ability or our customers’ and suppliers’ ability to successfully launch new product programs on a timely basis;
- our ability to realize the expected revenues from our new and incremental business backlog;
- our ability to maintain satisfactory labor relations and avoid work stoppages;
- our suppliers’, our customers’ and their suppliers’ ability to maintain satisfactory labor relations and avoid work stoppages;
- price volatility in, or reduced availability of, fuel;
- potential liabilities or litigation relating to, or assumed in, the MPG merger;
- potential adverse reactions or changes to business relationships resulting from the completion of the merger with MPG;

- our ability to protect our intellectual property and successfully defend against assertions made against us;
- our ability to attract and retain key associates;
- availability of financing for working capital, capital expenditures, research and development (R&D) or other general corporate purposes including acquisitions, as well as our ability to comply with financial covenants;
- our customers' and suppliers' availability of financing for working capital, capital expenditures, R&D or other general corporate purposes;
- changes in liabilities arising from pension and other postretirement benefit obligations;
- risks of noncompliance with environmental laws and regulations or risks of environmental issues that could result in unforeseen costs at our facilities or reputational damage;
- adverse changes in laws, government regulations or market conditions affecting our products or our customers' products;
- our ability or our customers' and suppliers' ability to comply with regulatory requirements and the potential costs of such compliance; and
- other unanticipated events and conditions that may hinder our ability to compete.

It is not possible to foresee or identify all such factors and we make no commitment to update any forward-looking statement or to disclose any facts, events or circumstances after the date hereof that may affect the accuracy of any forward-looking statement.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

MARKET RISK

Our business and financial results are affected by fluctuations in world financial markets, including currency exchange rates and interest rates. Our hedging policy has been developed to manage these risks to an acceptable level based on management's judgment of the appropriate trade-off between risk, opportunity and cost. We do not hold financial instruments for trading or speculative purposes.

**CURRENCY EXCHANGE RISK** From time to time, we use foreign currency forward and option contracts to reduce the effects of fluctuations in exchange rates relating to the Mexican Peso, Euro, Brazilian Real, British Pound Sterling, Thai Baht, Swedish Krona, Chinese Yuan, Polish Zloty and Indian Rupee. At December 31, 2017 and December 31, 2016, we had currency forward and option contracts with a notional amount of \$162.2 million and \$156.0 million outstanding, respectively. The potential decrease in fair value of foreign exchange contracts, assuming a 10% adverse change in the foreign currency exchange rates, would be approximately \$14.7 million at December 31, 2017 and was approximately \$14.2 million at December 31, 2016.

Future business operations and opportunities, including the expansion of our business outside North America, may further increase the risk that cash flows resulting from these global operations may be adversely affected by changes in currency exchange rates. If and when appropriate, we intend to manage these risks by creating natural hedges in the structure of our global operations, utilizing local currency funding of these expansions and various types of foreign exchange contracts.

**INTEREST RATE RISK** We are exposed to variable interest rates on certain credit facilities. From time to time, we have used interest rate hedging to reduce the effects of fluctuations in market interest rates. During 2017, we entered into a variable-to-fixed interest rate swap to reduce the variability of cash flow associated with interest payments on our variable rate debt. We have the following notional amounts hedged in relation to our variable-to-fixed interest rate swap: \$750.0 million through May 2018, \$600.0 million through May 2019, \$450.0 million through May 2020 and \$200.0 million through May 2021.

The pre-tax earnings and cash flow impact of a one-percentage-point increase in interest rates (approximately 18% of our weighted-average interest rate at December 31, 2017) on our long-term debt outstanding at December 31, 2017 would be approximately \$9.2 million and was approximately \$0.6 million at December 31, 2016, on an annualized basis.

## AMERICAN AXLE &amp; MANUFACTURING HOLDINGS, INC.

## Item 8. Financial Statements and Supplementary Data

Consolidated Statements of Income  
Year Ended December 31,

	2017	2016	2015
	(in millions, except per share data)		
Net sales	\$6,266.0	\$3,948.0	\$3,903.1
Cost of goods sold	5,146.9	3,221.9	3,267.7
Gross profit	1,119.1	726.1	635.4
Selling, general and administrative expenses	390.1	314.2	274.1
Amortization of intangible assets	75.3	5.0	3.2
Restructuring and acquisition-related costs	110.7	26.2	—
Operating income	543.0	380.7	358.1
Interest expense	(195.6 )	(93.4 )	(99.2 )
Investment income	2.9	2.9	2.6
Other income (expense)			
Debt refinancing and redemption costs	(3.5 )	—	(0.8 )
Other, net	(6.8 )	8.8	12.0
Income before income taxes	340.0	299.0	272.7
Income tax expense	2.5	58.3	37.1
Net income	\$337.5	\$240.7	\$235.6
Net income attributable to noncontrolling interests	(0.4 )	—	—
Net income attributable to AAM	\$337.1	\$240.7	\$235.6
Basic earnings per share	\$3.22	\$3.08	\$3.03
Diluted earnings per share	\$3.21	\$3.06	\$3.02

See accompanying notes to consolidated financial statements



## AMERICAN AXLE &amp; MANUFACTURING HOLDINGS, INC.

Consolidated Statements of Comprehensive Income  
Year Ended December 31,

	2017	2016	2015
	(in millions)		
Net income	\$337.5	\$240.7	\$235.6
Other comprehensive income (loss)			
Defined benefit plans, net of \$3.4 million, \$4.7 million and \$(8.5) million of tax in 2017, 2016 and 2015, respectively	(8.5 )	(19.6 )	16.7
Foreign currency translation adjustments	88.3	(3.2 )	(70.3 )
Changes in cash flow hedges, net of tax of \$(0.2) million in 2017	17.1	(10.3 )	(6.0 )
Other comprehensive income (loss)	96.9	(33.1 )	(59.6 )
Comprehensive income	\$434.4	\$207.6	\$176.0
Net income attributable to noncontrolling interests	(0.4 )	—	—
Comprehensive income attributable to AAM	\$434.0	\$207.6	\$176.0

See accompanying notes to consolidated financial statements

## AMERICAN AXLE &amp; MANUFACTURING HOLDINGS, INC.

## Consolidated Balance Sheets

December 31,

	2017	2016
	(in millions, except per share data)	
Assets		
Current assets		
Cash and cash equivalents	\$376.8	\$481.2
Accounts receivable, net	1,035.9	560.0
Inventories, net	392.0	182.3
Prepaid expenses and other	140.3	75.8
Total current assets	1,945.0	1,299.3
Property, plant and equipment, net	2,402.9	1,093.7
Deferred income taxes	37.1	367.8
Goodwill	1,654.3	154.0
Intangible assets, net	1,212.5	28.5
GM postretirement cost sharing asset	252.2	236.1
Other assets and deferred charges	378.8	242.9
Total assets	\$7,882.8	\$3,422.3
Liabilities and Stockholders' Equity		
Current liabilities		
Current portion of long-term debt	\$5.9	\$3.3
Accounts payable	799.0	382.3
Accrued compensation and benefits	200.0	139.3
Deferred revenue	34.1	24.6
Accrued expenses and other	177.4	102.0
Total current liabilities	1,216.4	651.5
Long-term debt, net	3,969.3	1,400.9
Deferred revenue	78.8	70.8
Deferred income taxes	101.7	15.0
Postretirement benefits and other long-term liabilities	976.6	779.9
Total liabilities	6,342.8	2,918.1
Stockholders' equity		
Series A junior participating preferred stock, par value \$0.01 per share; 0.1 million shares authorized; no shares outstanding in 2017 or 2016	—	—
Preferred stock, par value \$0.01 per share; 10.0 million shares authorized; no shares outstanding in 2017 or 2016	—	—
Series common stock, par value \$0.01 per share; 40.0 million shares authorized; no shares outstanding in 2017 or 2016	—	—
Common stock, par value \$0.01 per share; 150.0 million shares authorized; 118.2 million and 83.0 million shares issued as of December 31, 2017 and December 31, 2016, respectively	1.2	0.9
Paid-in capital	1,264.6	660.1
Retained earnings	761.0	423.9
Treasury stock at cost, 6.9 million shares in 2017 and 6.5 million shares in 2016	(198.1 )	(191.1 )
Accumulated other comprehensive loss		

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Defined benefit plans, net of tax	(252.0 )	(243.5 )
Foreign currency translation adjustments	(34.1 )	(122.4 )
Unrecognized loss on cash flow hedges, net of tax	(6.6 )	(23.7 )
Total AAM stockholders' equity	1,536.0	504.2
Noncontrolling interests in subsidiaries	4.0	—
Total stockholders' equity	1,540.0	504.2
Total liabilities and stockholders' equity	\$7,882.8	\$3,422.3

See accompanying notes to consolidated financial statements

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## AMERICAN AXLE &amp; MANUFACTURING HOLDINGS, INC.

Consolidated Statements of Cash Flows  
Year Ended December 31,

	2017	2016	2015
	(in millions)		
Operating activities			
Net income	\$337.5	\$240.7	\$235.6
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	428.5	201.8	198.4
Impairment of property, plant and equipment	1.5	3.4	—
Deferred income taxes	(154.2)	33.2	26.4
Stock-based compensation	43.4	21.0	15.9
Pensions and other postretirement benefits, net of contributions	(6.0)	(12.6)	(25.6)
Loss on disposal of property, plant and equipment, net	1.6	4.3	4.2
Debt refinancing and redemption costs	3.5	—	0.8
Changes in operating assets and liabilities, net of amounts acquired			
Accounts receivable	(44.9)	(19.3)	(17.9)
Inventories	2.5	12.2	11.2
Accounts payable and accrued expenses	(12.6)	(14.2)	(2.1)
Deferred revenue	14.8	7.2	(26.8)
Other assets and liabilities	31.4	(70.1)	(42.5)
Net cash provided by operating activities	647.0	407.6	377.6
Investing activities			
Purchases of property, plant and equipment	(477.7)	(223.0)	(193.5)
Proceeds from sale of property, plant and equipment	2.5	1.7	0.3
Purchase buyouts of leased equipment	(13.3)	(4.6)	—
Proceeds from government grants	—	2.8	5.1
Final distribution of Reserve Yield Plus Fund	—	1.0	—
Proceeds from sale of business, net	5.9	—	—
Acquisition of business, net of cash acquired	(895.5)	(5.6)	—
Net cash used in investing activities	(1,378.1)	(227.7)	(188.1)
Financing activities			
Net short-term proceeds from credit facilities	4.4	—	—
Proceeds from issuance of long-term debt	2,862.7	30.3	16.8
Payments of long-term debt, capital lease obligations and other	(2,154.4)	(7.0)	(157.0)
Debt issuance costs	(91.0)	—	—
Purchase of noncontrolling interest	—	—	(1.1)
Employee stock option exercises	0.9	0.3	0.8
Purchase of treasury stock	(7.0)	(5.2)	(3.1)
Net cash provided by (used in) financing activities	615.6	18.4	(143.6)
Effect of exchange rate changes on cash	11.1	0.4	(12.6)
Net increase (decrease) in cash and cash equivalents	(104.4)	198.7	33.3
Cash and cash equivalents at beginning of year	481.2	282.5	249.2
Cash and cash equivalents at end of year	\$376.8	\$481.2	\$282.5

Supplemental cash flow information

Interest paid	\$182.7	\$87.2	\$93.8
Income taxes paid, net	\$31.9	\$48.6	\$11.3
Non-cash investing activities: AAM common shares issued for acquisition of MPG	\$576.7	\$—	\$—

See accompanying notes to consolidated financial statements

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## AMERICAN AXLE &amp; MANUFACTURING HOLDINGS, INC.

## Consolidated Statement of Stockholders' Equity

	Common Stock Shares Outstanding (in millions)	Par Value	Paid-in Capital	Retained Earnings (Accumulated Deficit)	Treasury Stock	Accumulated Other Comprehensive Loss	Noncontrolling Interest in Subsidiaries
Balance at January 1, 2015	75.8	\$ 0.8	\$623.7	\$ (31.4 )	\$(182.8)	\$( 296.9 )	\$ —
Cumulative effect of change in accounting principle (as described in Note 1)				(25.8 )			
Net income				235.6			
Changes in cash flow hedges						(6.0 )	
Foreign currency translation adjustments						(70.3 )	
Defined benefit plans, net						16.7	
Exercise of stock options and vesting of restricted stock units	0.4		0.9				
Stock-based compensation			15.9				
Acquisition of noncontrolling interest			(1.6 )				
Purchase of treasury stock	(0.1 )				(3.1 )		
Balance at December 31, 2015	76.1	\$ 0.8	\$638.9	\$ 178.4	\$(185.9)	\$( 356.5 )	\$ —
Net income				240.7			
Changes in cash flow hedges						(10.3 )	
Foreign currency translation adjustments						(3.2 )	
Defined benefit plans, net						(19.6 )	
Exercise of stock options and vesting of restricted stock units and performance shares	0.7	0.1	0.2				
Stock-based compensation			21.0				
Modified-retrospective application of ASU 2016-09				4.8			
Purchase of treasury stock	(0.3 )				(5.2 )		
Balance at December 31, 2016	76.5	\$ 0.9	\$660.1	\$ 423.9	\$(191.1)	\$( 389.6 )	\$ —
Net income				337.1			0.4
Changes in cash flow hedges						17.1	
Foreign currency translation adjustments						88.3	
Defined benefit plans, net						(8.5 )	
Acquisition of MPG	34.3	0.3	579.6		(1.7 )		3.6
Exercise of stock options and vesting of restricted stock units and performance shares	0.8		0.9				
Stock-based compensation			24.0				
Purchase of treasury stock	(0.3 )				(5.3 )		
Balance at December 31, 2017	111.3	\$ 1.2	\$1,264.6	\$ 761.0	\$(198.1)	\$( 292.7 )	\$ 4.0

See accompanying notes to consolidated financial statements



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**ORGANIZATION** On April 6, 2017, Alpha SPV I, Inc., a wholly-owned subsidiary of American Axle & Manufacturing Holdings, Inc. (Holdings), merged with and into Metaldyne Performance Group, Inc. (MPG) with MPG as the surviving corporation in the merger. Upon consummation of the merger, MPG became a wholly-owned subsidiary of Holdings. As a result, we are now a global Tier I supplier to the automotive, commercial and industrial markets. We design, engineer, validate and manufacture driveline, metal forming, powertrain and casting products, employing over 25,000 associates, operating at more than 90 facilities in 17 countries, to support our customers on global and regional platforms with a continued focus on delivering operational excellence, technology leadership and quality. See Note 3 - Business Combinations for further detail on our acquisition of MPG.

**PRINCIPLES OF CONSOLIDATION** We include the accounts of Holdings and its subsidiaries in our consolidated financial statements. We eliminate the effects of all intercompany transactions, balances and profits in our consolidation.

**REVENUE RECOGNITION** We recognize revenue when products are shipped to our customers and title transfers under standard commercial terms or when realizable in accordance with our commercial agreements. If we are uncertain as to whether we will be successful collecting a balance in accordance with our understanding of a commercial agreement, we do not recognize the revenue or cost recovery until such time as the uncertainty is removed.

During 2016, we reached an agreement with a customer to increase installed capacity for a program we support. In 2017, we received \$5.0 million, and in 2016 we received \$20.0 million, associated with this capacity increase and recorded the payments as deferred revenue, of which approximately \$3.7 million is classified as a current liability, and \$21.3 million is classified as a noncurrent liability, on our Consolidated Balance Sheet. We expect to begin recognizing this deferred revenue in 2018 into revenue on a straight-line basis over a period of approximately five years, which is the period that we expect the customer to benefit from this increase in installed capacity.

At December 31, 2017 and 2016, we had deferred revenue of \$34.1 million and \$24.6 million, respectively, classified as a current liability and \$78.8 million and \$70.8 million, respectively, classified as a noncurrent liability in our Consolidated Balance Sheets. These amounts were primarily related to cash receipts from customers for various settlements and commercial agreements that are associated with a future benefit to these customers. We recognize this deferred revenue into revenue over the period that we expect the customer to benefit. We recognized \$26.8 million, \$24.9 million and \$23.4 million of revenue related to deferred revenue for the years ended December 31, 2017, 2016 and 2015, respectively.

**RESEARCH AND DEVELOPMENT (R&D) COSTS** We expense R&D, as incurred, in selling, general and administrative expenses on our Consolidated Statement of Income. R&D spending was \$161.5 million, \$139.8 million and \$113.9 million in 2017, 2016 and 2015, respectively.

**CASH AND CASH EQUIVALENTS** Cash and cash equivalents include all cash balances, savings accounts, sweep accounts, and highly liquid investments in money market funds and certificates of deposit with maturities of 90 days or less at the time of purchase.

**ACCOUNTS RECEIVABLE** The majority of our accounts receivable are due from original equipment manufacturers (OEMs) in the automotive industry and are past due when payment is not received within the stated terms. Trade accounts receivable for our customers are generally due within approximately 50 days from the date our

customers receive our product.

Amounts due from customers are stated net of allowances for doubtful accounts. We determine our allowances by considering factors such as the length of time accounts are past due, our previous loss history, the customer's ability to pay its obligation to us, and the condition of the general economy and the industry as a whole. The allowance for doubtful accounts was \$7.0 million and \$3.1 million as of December 31, 2017 and 2016, respectively. We write-off accounts receivable when they become uncollectible.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

**CUSTOMER TOOLING AND PRE-PRODUCTION COSTS RELATED TO LONG-TERM SUPPLY AGREEMENTS** Engineering, R&D, and other pre-production design and development costs for products sold on long-term supply arrangements are expensed as incurred unless we have a contractual guarantee for reimbursement from the customer. Reimbursements received for pre-production costs relating to awarded programs are deferred and recognized into revenue over the life of the associated program. Reimbursements received for pre-production costs relating to future programs that have not been awarded, or amounts received for programs that become discontinued prior to production, are recorded as a reduction of expense.

Costs for tooling used to make products sold on long-term supply arrangements for which we have either title to the assets or the noncancelable right to use the assets during the term of the supply arrangement are capitalized in property, plant and equipment. Reimbursable costs for tooling assets for which our customer has title and we do not have a noncancelable right to use during the term of the supply arrangement, are recorded in accounts receivable in our consolidated balance sheets. The reimbursement for the customer-owned tooling is recorded as a reduction of accounts receivable upon collection. Capitalized items and customer receipts in excess of tooling costs specifically related to a supply arrangement are amortized over the shorter of the term of the arrangement or over the estimated useful lives of the related assets.

**INVENTORIES** We state our inventories at the lower of cost or net realizable value. The cost of our inventories is determined using the FIFO method. When we determine that our gross inventories exceed usage requirements, or if inventories become obsolete or otherwise not saleable, we record a provision for such loss as a component of our inventory accounts.

Inventories consist of the following:

	December 31,	
	2017	2016
	(in millions)	
Raw materials and work-in-progress	\$319.7	\$163.3
Finished goods	89.6	33.8
Gross inventories	409.3	197.1
Inventory valuation reserves	(17.3 )	(14.8 )
Inventories, net	\$392.0	\$182.3

Effective April 1, 2017, we changed our method of accounting for indirect inventory from capitalizing and recording as expense when the inventory was consumed to now expensing indirect inventory at the time of purchase. We believe that expensing indirect inventory at the time of purchase is preferable as the change (1) aligns purchase patterns of indirect inventory with our current operational strategies, (2) reduces administrative burden associated with record keeping for indirect inventory, and (3) results in a uniform accounting policy across our global operations as MPG's accounting method had been to expense indirect inventory upon purchase.

Based on the guidance in Accounting Standards Codification (ASC) 250 Accounting Changes and Error Corrections we applied this change in accounting principle retrospectively. As a result of the change, we have decreased previously reported inventories, net by \$37.2 million, decreased previously reported retained earnings by \$25.8 million and increased previously reported deferred tax assets by \$11.4 million as of January 1, 2016 and December 31, 2016.

The cumulative impact of the change in accounting principle from January 1, 2015 to March 31, 2017, which covers the periods in which we would be required to retrospectively revise our Statements of Income, is an increase to income of \$2.4 million, net of tax. We have determined that the quarterly impact of this adjustment would not be material in any required prior period nor is the impact of recording the cumulative impact of \$2.4 million, net of tax material to the current period. As such, we recorded the \$2.4 million, net of tax related to prior periods in the second quarter of 2017. The impact of this \$2.4 million, net of tax adjustment to income resulted in an increase in basic and diluted earnings per share of \$0.02 per share for the year ended December 31, 2017. The impact on the current period income for the year ended December 31, 2017 was immaterial in comparison to accounting for indirect inventory under our historical accounting policy. Based on this change in accounting principle, Raw



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

materials and work-in-progress, and Inventory valuation reserves as of December 31, 2016 reflect decreases of \$49.4 million and \$12.2 million, respectively.

**PROPERTY, PLANT AND EQUIPMENT** We state property, plant and equipment, including amortizable tooling, at historical cost, as adjusted for impairments. Construction in progress includes costs incurred for the construction of buildings and building improvements, and machinery and equipment in process. Repair and maintenance costs that do not extend the useful life or otherwise improve the utility of the asset beyond its existing useful state are expensed in the period incurred.

We record depreciation and tooling amortization using the straight-line method over the estimated useful lives of the depreciable assets. Depreciation and tooling amortization amounted to \$301.6 million, \$160.4 million and \$163.6 million in 2017, 2016 and 2015, respectively.

Property, plant and equipment consists of the following:

	Estimated Useful Lives (years)	December 31, 2017      2016 (in millions)	
Land	Indefinite	\$58.0	\$24.9
Land improvements	10-15	20.8	19.2
Buildings and building improvements	15-40	465.8	345.5
Machinery and equipment	3-12	2,962.8	1,976.0
Construction in progress		567.7	109.9
		4,075.1	2,475.5
Accumulated depreciation and amortization		(1,672.2 )	(1,381.8 )
Property, plant and equipment, net		\$2,402.9	\$1,093.7

As of December 31, 2017, 2016 and 2015, we had unpaid purchases of plant and equipment in our accounts payable of \$103.0 million, \$19.0 million and \$43.6 million, respectively.

**IMPAIRMENT OF LONG-LIVED ASSETS** When impairment indicators exist, we evaluate the carrying value of long-lived assets for potential impairment. We consider projected future undiscounted cash flows, trends and other circumstances in making such estimates and evaluations. If impairment is deemed to exist, the carrying amount of the asset is adjusted based on its fair value. Recoverability of assets "held for use" is determined by comparing the forecasted undiscounted cash flows of the operations to which the assets relate to their carrying amount. When the carrying value of an asset group exceeds its fair value and is therefore nonrecoverable, those assets are written down to fair value. Fair value is determined based on market prices, when available, or a discounted cash flow analysis performed using management estimates.

**GOODWILL** We record goodwill when the purchase price of acquired businesses exceeds the value of their identifiable net tangible and intangible assets acquired. We test our goodwill annually as of October 1, or more frequently if necessary, for impairment in accordance with the accounting guidance for goodwill and other indefinite-lived intangibles. We completed impairment tests in 2017 and 2016 and concluded that there was no impairment of our goodwill. See Note 4 - Goodwill and Intangible Assets, for more detail on our goodwill.

**OTHER INTANGIBLE ASSETS** In connection with our acquisitions of USM Mexico Manufacturing LLC (USM Mexico) and MPG, we recognized \$1,254.8 million of amortizable intangible assets for customer platforms, customer relationships, developed technology and licensing agreements. These intangible assets will be amortized over a period ranging from five to 17 years. The intangible assets were valued using primarily the relief from royalty method or the

multi-period excess earnings method, both of which utilize significant unobservable inputs. These inputs are defined in the fair value hierarchy as Level 3 inputs, which require management to make estimates and assumptions regarding certain financial measures using forecasted or projected information. See Note 4 - Goodwill and Intangible Assets, for more detail on our intangible assets.

**DEBT ISSUANCE COSTS** The costs related to the issuance or modification of long-term debt are deferred and amortized into interest expense over the expected life of the borrowings. As of December 31, 2017 and

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

December 31, 2016, our unamortized debt issuance costs were \$93.1 million and \$16.7 million, respectively. Debt issuance costs associated with our senior unsecured notes, as well as our Term Loan A Facility and Term Loan B Facility (as defined in Note 5 - Long-Term Debt and Lease Obligations), are recorded as a reduction to the related debt liability. Debt issuance costs of \$17.5 million and \$5.0 million related to our Revolving Credit Facility (also as defined in Note 5 - Long-Term Debt and Lease Obligations), are classified as Other assets and deferred charges on our Consolidated Balance Sheets as of December 31, 2017 and December 31, 2016, respectively. Unamortized debt issuance costs that exist upon the extinguishment of debt are expensed and classified as debt refinancing and redemption costs on our Consolidated Statement of Income.

**DERIVATIVES** We recognize all derivatives on the balance sheet at fair value and we are not subject to master netting agreements. If a derivative qualifies under the accounting guidance as a hedge, depending on the nature of the hedge, changes in the fair value of the derivative are either offset against the change in fair value of the hedged asset, liability or firm commitment through earnings or recognized in other comprehensive income until the hedged item is recognized in earnings. The ineffective portion of a derivative's change in fair value, and changes in the fair value of derivatives that do not qualify as hedges, are immediately recognized in earnings. See Note 6 - Derivatives and Risk Management, for more detail on our derivatives.

**CURRENCY TRANSLATION AND REMEASUREMENT** We translate the assets and liabilities of our foreign subsidiaries to U.S. dollars at end-of-period exchange rates. We translate the income statement elements of our foreign subsidiaries to U.S. dollars at average-period exchange rates. We report the effect of translation for our foreign subsidiaries that use the local currency as their functional currency as a separate component of stockholders' equity. Gains and losses resulting from the remeasurement of assets and liabilities in a currency other than the functional currency of a subsidiary are reported in current period income. We also report any gains and losses arising from transactions denominated in a currency other than the functional currency of a subsidiary in current period income. These foreign currency gains and losses resulted in a net loss of \$7.3 million in 2017, and net gains of \$5.8 million and \$9.5 million for the years 2016 and 2015, respectively, in Other income (expense).

**PENSION AND OTHER POSTRETIREMENT DEFINED BENEFIT PLANS** Net pension and postretirement benefit expenses and the related liabilities are determined on an actuarial basis. These plan expenses and obligations are dependent on management's assumptions developed in consultation with our actuaries. We review these actuarial assumptions at least annually and make modifications when appropriate. See Note 8 - Employee Benefit Plans, for more detail on our pension and other postretirement defined benefit plans.

**STOCK-BASED COMPENSATION** We have stock-based compensation in the form of restricted stock units (RSUs) and performance shares. For non-performance based awards, the grant date fair value is measured as the stock price at the date of grant. For performance based awards, fair value is estimated using valuation techniques that require management to use estimates and assumptions. Certain awards require that management's estimates and assumptions be evaluated at each reporting date to determine if compensation expense related to the award should be adjusted, both on a catch-up and go-forward basis. Compensation expense is recognized over the period during which the requisite service is provided, referred to as the vesting period. See Note 9 - Stock-Based Compensation, for more detail on our accounting for stock-based compensation.

**DEFERRED INCOME TAX ASSETS AND LIABILITIES AND VALUATION ALLOWANCES** Our deferred income tax assets and liabilities reflect the impact of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the basis of such assets and liabilities as measured by tax laws.

In accordance with the accounting guidance for income taxes, we estimate whether recoverability of our deferred tax assets is "more likely than not," based on forecasts of taxable income in the related tax jurisdictions. In this estimate, we

use historical results, projected future operating results based upon approved business plans, eligible carryforward periods, tax planning opportunities and other relevant considerations. This includes the consideration of tax law changes, prior profitability performance and the uncertainty of future projected profitability. We record a valuation allowance to reduce our deferred tax assets to the amount that is "more likely than not," to be realized.

We record uncertain tax positions on the basis of a two-step process whereby: (1) we determine whether it is "more likely than not" that the tax positions will be sustained based on the technical merits of the position; and (2) for those positions that meet the "more likely than not" recognition threshold, we recognize the largest amount of tax

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

benefit that is greater than 50% likely to be realized upon ultimate settlement with the related tax authority. We record interest and penalties on uncertain tax positions in income tax expense (benefit).

See Note 10 - Income Taxes, for more detail on our accounting for income taxes.

**EARNINGS PER SHARE (EPS)** We present EPS using the two-class method. This method allocates undistributed earnings between common shares and non-vested share based payment awards that entitle the holder to non-forfeitable dividend rights. Our participating securities include non-vested restricted stock units. See Note 11 - Earnings Per Share (EPS), for more detail on our accounting for EPS.

**SHARE REPURCHASE PROGRAM** In 2016, AAM's Board of Directors authorized a share repurchase program of up to \$100 million of AAM's common shares through December 31, 2018 as part of AAM's overall capital allocation strategy. The repurchase of shares may be made in the open market or in privately negotiated transactions and will be funded through available cash balances and cash flow from operations. The timing and amount of any share repurchases will be determined based on market and economic conditions, share price, alternative uses of capital and other factors. We did not repurchase any shares under the share repurchase program during 2017. As of December 31, 2017 there is approximately \$98.5 million available for repurchase.

**PRODUCT WARRANTY** See Note 12 - Commitments and Contingencies, for more detail on our accounting for product warranties.

**USE OF ESTIMATES** In order to prepare consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP), we are required to make estimates and assumptions that affect the reported amounts and disclosures in our consolidated financial statements. Actual results could differ from those estimates.

#### EFFECT OF NEW ACCOUNTING STANDARDS

##### Accounting Standards Update 2017-12

On August 28, 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2017-12 - Targeted Improvements to Accounting for Hedging Activities (Topic 815). ASU 2017-12 is intended to better align the risk management activities of a company with the company's financial reporting for hedging relationships. This guidance expands and refines several aspects of hedge accounting. The most applicable changes to AAM as a result of the new guidance are as follows: 1) the concept of risk component hedging is introduced in ASU 2017-12, which could allow us to hedge contractually specified components in a contract; 2) the guidance now allows entities to utilize a 31-day period in assessing whether the critical terms of a forecasted transaction match the maturity of the hedging derivative, which could allow for expanded use of hedging instruments for certain sales and purchases; and 3) we may now qualitatively assess hedge effectiveness on a quarterly basis when the facts and circumstances related to the hedging relationship have not changed significantly. This guidance becomes effective at the beginning of our 2019 fiscal year, however early adoption is permitted, and we have adopted this guidance effective January 1, 2018. The adoption of this guidance will not have any impact on the measurement or presentation of our existing hedging relationships.

##### Accounting Standards Update 2017-07

On March 10, 2017, the FASB issued ASU 2017-07 - Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. The amendments in this

update require that an employer disaggregate the service cost component from the other components of defined benefit pension cost and postretirement benefit cost (net benefit cost). Subsequent to the adoption of this guidance, only the service cost component of net benefit cost will be included in the subtotal operating income in our Consolidated Statements of Income and only the service cost component will be eligible for capitalization. This guidance became effective at the beginning of our 2018 fiscal year and requires a retrospective transition method for the income statement classification of the net benefit cost components and a prospective transition method for the capitalization of the service cost component in assets. The adoption of this guidance is not expected to have a material impact on our consolidated financial statements.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Accounting Standards Update 2017-04

On January 26, 2017, the FASB issued ASU 2017-04 - Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. The amendments in this update modify the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination, or what is referred to under existing guidance as "Step 2." Instead, under the amendments in this update, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. This guidance becomes effective at the beginning of our 2020 fiscal year and early adoption is permitted. The guidance requires a prospective transition method. We do not expect the adoption of this guidance to have a material effect on our consolidated financial statements, however, goodwill could be more susceptible to impairment in periods subsequent to adoption.

Accounting Standards Update 2016-16

On October 24, 2016, the FASB issued Accounting Standards Update (ASU) 2016-16 - Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. Existing income tax guidance prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. This existing guidance is deemed an exception to the principle of comprehensive recognition of current and deferred income taxes under accounting principles generally accepted in the United States of America (GAAP). Due to the limited authoritative guidance about this exception, diversity in practice exists. ASU 2016-16 eliminates this exception for intra-entity transfers of assets other than inventory and requires that entities recognize the income tax consequences when the transfers occur. This guidance was effective January 1, 2018 and requires a modified retrospective transition method. The adoption of this guidance did not have a significant impact on our consolidated financial statements.

Accounting Standards Update 2016-02

On February 25, 2016, the FASB issued ASU 2016-02 - Leases (Topic 842), and has subsequently issued ASU 2017-13 - Revenue Recognition (Topic 605), Revenue from Contracts with Customers (Topic 606), Leases (Topic 840) and Leases (Topic 842) (collectively the Lease ASUs) which supersede the existing lease accounting guidance and establish new criteria for recognizing lease assets and liabilities. The most significant impact of the updates, to AAM, is that a lessee will be required to recognize a "right-of-use" asset and lease liability for operating lease agreements that were not previously included on the balance sheet under the existing lease guidance. A lessee will be permitted to make a policy election, excluding recognition of the right-of-use asset and associated liability for lease terms of 12 months or less. Expense recognition in the statement of income along with cash flow statement classification for both financing (capital) and operating leases under the new standard will not be significantly changed from existing lease guidance. This guidance becomes effective for AAM at the beginning of our 2019 fiscal year and requires transition under a modified retrospective method. We are currently assessing the impact that this standard will have on our consolidated financial statements.

Accounting Standards Update 2014-09

In 2014, the FASB issued ASU 2014-09 - Revenue from Contracts with Customers (Topic 606), and has subsequently issued ASUs 2015-14 - Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, 2016-08 - Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross Versus Net), 2016-10 - Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, 2016-12 - Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients, 2016-20 - Revenue from Contracts with Customers (Topic 606): Technical Corrections and Improvements to Topic 606 and 2017-13 - Revenue Recognition (Topic 605), Revenue from Contracts with Customers (Topic 606), Leases (Topic 840) and Leases (Topic 842) (collectively, the Revenue Recognition ASUs).

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The Revenue Recognition ASUs outline a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersede most current revenue recognition guidance, including industry-specific guidance. The guidance is based on the principle that an entity should recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. This guidance became effective for AAM on January 1, 2018 and we have adopted this guidance using the modified retrospective approach.

We have evaluated each of the five steps in the new revenue recognition model, which are as follows: 1) Identify the contract with the customer; 2) Identify the performance obligations in the contract; 3) Determine the transaction price; 4) Allocate the transaction price to the performance obligations; and 5) Recognize revenue when (or as) performance obligations are satisfied. We do not expect the impact of implementing the Revenue Recognition ASUs to be material to our financial statements, nor do we expect our method and timing for recognizing revenue subsequent to the implementation of the Revenue Recognition ASUs to vary significantly from our revenue recognition practices under current GAAP.

There are also certain considerations related to internal control over financial reporting that are associated with implementing the new guidance under Topic 606 and we have designed and implemented the necessary changes to our control framework for the new guidance. Specifically, disclosure requirements under the new guidance in Topic 606 have been significantly expanded in comparison to the disclosure requirements under the current guidance. We have completed our assessment of the new disclosure requirements and are completing the process of drafting our disclosures for both interim and annual periods under Topic 606.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

## 2. RESTRUCTURING AND ACQUISITION-RELATED COSTS

In 2016, AAM initiated actions under a global restructuring program focused on creating a more streamlined organization in addition to reducing our cost structure and preparing for acquisition and integration activities. A summary of this activity for the years 2017 and 2016 is shown below:

	Severance Charges	Implementation Costs	Asset Impairment Charges	Total
	(in millions)			
Accrual at January 1, 2016	\$—	\$ —	\$ —	\$—
Charges	0.6	10.2	4.5	15.3
Cash utilization	—	(1.0 )	—	(1.0 )
Non-cash utilization	—	—	(4.5 )	(4.5 )
Accrual at December 31, 2016	0.6	9.2	—	9.8
Charges	2.0	13.9	1.5	17.4
Cash utilization	(2.3 )	(23.1 )	—	(25.4)
Non-cash utilization	—	—	(1.5 )	(1.5 )
Accrual at December 31, 2017	\$0.3	\$ —	\$ —	\$0.3

As part of our restructuring actions, we incurred severance charges of approximately \$2.0 million, as well as implementation costs, including professional expenses, of approximately \$13.9 million in 2017. During the fourth quarter of 2017, we recorded a \$1.5 million asset impairment related to the pending closure of one of our manufacturing facilities. In 2016, we incurred severance charges of approximately \$0.6 million, as well as other implementation costs, including professional fees, of approximately \$10.2 million, and asset impairment charges of \$4.5 million, primarily related to the announced closure of a manufacturing facility in India.

Since the inception of our global restructuring program, we have incurred severance charges totaling \$2.6 million, implementation costs totaling \$24.1 million, and impairment charges totaling \$6.0 million. We expect to incur \$10 to \$20 million of additional charges under our global restructuring program in 2018.

On March 1, 2017, we completed our acquisition of USM Mexico and on April 6, 2017, we completed our acquisition of MPG. The following table represents a summary of acquisition-related charges incurred in 2017 related to our acquisitions of USM Mexico and MPG:

	Acquisition-Related Costs	Severance Charges	Integration Expenses	Total
	(in millions)			
Charges	\$40.7	\$ 7.2	\$ 45.4	\$93.3

Total restructuring and  
acquisition-related charges in 2017 \$110.7

Acquisition-related costs primarily consist of advisory, legal, accounting, valuation and certain other professional or consulting fees incurred. Also included in acquisition-related costs is a one-time charge of approximately \$20 million for MPG stock-based compensation that was accelerated and settled as a result of the acquisition. Integration expenses reflect costs incurred for information technology systems, ongoing operational activities, and consulting fees incurred in conjunction with the acquisitions. Total charges associated with our global restructuring program and acquisition-related charges of \$110.7 million are shown on a separate line item titled "Restructuring and Acquisition-Related Costs" in our Consolidated Statements of Income.



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

3. BUSINESS COMBINATIONS

Acquisition of MPG

On April 6, 2017, AAM completed our acquisition of 100% of the equity interests of MPG for a total purchase price of approximately \$1.5 billion plus the assumption of approximately \$1.7 billion in net debt (comprised of approximately \$1.9 billion in debt less approximately \$0.2 billion of MPG cash and cash equivalents). Under the terms of the agreement and plan of merger (Merger Agreement), each share of MPG common stock (other than MPG excluded shares as defined in the Merger Agreement) was converted into the right to receive (a) \$13.50 in cash, without interest, and (b) 0.5 of a share of AAM common stock (Merger Consideration). Further, MPG stock options outstanding immediately prior to the effective time of the merger were accelerated and holders of the stock options received in cash the Merger Consideration less the per share exercise price of the MPG stock options. All MPG restricted shares and restricted stock unit awards outstanding under an MPG equity plan were also accelerated and each holder thereof received the Merger Consideration for each restricted share or restricted stock unit award of MPG common stock.

MPG provides highly-engineered components for use in powertrain and safety-critical platforms for the global light, commercial and industrial markets. MPG produces these components using complex metal-forming manufacturing technologies and processes for a global customer base of OEMs and Tier I suppliers, which help their customers meet fuel economy, performance and safety standards. Our acquisition of MPG contributes significantly to diversifying our global customer base and end markets, while also allowing us to expand our presence as a global Tier I supplier to the commercial and industrial markets, in addition to our existing presence as a global Tier I supplier to the automotive industry.

The aggregate cash consideration for our acquisition of MPG was financed using (i) net proceeds from the issuance in March 2017 by AAM of \$1.2 billion of new senior notes consisting of \$700.0 million aggregate principal amount of 6.25% senior notes due 2025, and \$500.0 million aggregate principal amount of 6.50% senior notes due 2027, and on April 6, 2017: (ii) borrowings by AAM of \$100.0 million under the Term Loan A that matures in 2022, (iii) borrowings by AAM of \$1.55 billion under the Term Loan B that matures in 2024, and (iv) cash on hand.

Our acquisition of MPG was accounted for under the acquisition method under Accounting Standards Codification 805 Business Combinations (ASC 805) with the purchase price allocated to the identifiable assets and liabilities of the acquired company based on the respective fair values of the assets and liabilities.

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 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The following represents the preliminary fair values of the assets acquired and liabilities assumed resulting from the acquisition, as well as the calculation of goodwill:

(in millions)	April 6, 2017
Cash consideration	\$953.5
Share consideration	576.7
Total consideration transferred	\$1,530.2
Fair value of MPG noncontrolling interests	3.6
Total fair value of MPG	\$1,533.8
Cash and cash equivalents	\$202.1
Accounts receivable	403.1
Inventories	199.0
Prepaid expenses and other long-term assets	119.9
Property, plant and equipment	973.0
Intangible assets	1,223.1
Total assets acquired	\$3,120.2
Accounts payable	287.8
Accrued expenses and other	137.7
Deferred income tax liabilities	580.5
Debt	1,918.7
Postretirement benefits and other long-term liabilities	54.1
Net assets acquired	\$141.4
Goodwill	\$1,392.4

The preliminary allocation of the purchase price to the assets acquired and liabilities assumed, including the residual amount recognized as goodwill, is based upon estimated information and is subject to change within the measurement period. Under the guidance in ASC 805, the measurement period is a period not to exceed one year from the acquisition date during which we may adjust estimated or provisional amounts recorded during purchase accounting if new information is obtained about facts and circumstances that existed as of the acquisition date that, if known, would have resulted in revised estimated values of those assets or liabilities as of that date. Measurement period adjustments are recorded in the period identified with an offsetting entry to goodwill. Any adjustments to amounts recorded in purchase accounting that do not qualify as measurement period adjustments are included in earnings in the period identified.

In the third and fourth quarters of 2017, we made measurement period adjustments to reflect changes to facts and circumstances that existed as of the acquisition date, which resulted in a net increase in Goodwill of \$16.2 million. These adjustments related primarily to Intangible assets and Property, plant and equipment, as well as the corresponding impact on Deferred income tax liabilities, as a result of changes to our third-party valuation and customary post-closing reviews. The impact to our Consolidated Statement of Income for the year ended December 31, 2017 as a result of adjusting our Intangible assets and Property, plant and equipment was immaterial.

The fair values of the assets acquired and liabilities assumed are based on our preliminary estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. While we believe that these preliminary estimates provide a reasonable basis for estimating the fair value of the assets acquired and liabilities assumed, we will continue to evaluate available information prior to finalization of the amounts. The primary areas of the preliminary purchase price allocation that are not yet finalized relate to the fair value of property, plant and equipment and intangible assets, as well as deferred

income tax assets and liabilities. We have also recorded an estimated amount of approximately \$23 million in Debt related to a capital lease obligation that was in negotiation for settlement at the acquisition date and remains in negotiation as of December 31, 2017.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Goodwill resulting from the acquisition is primarily attributable to anticipated synergies and economies of scale from which we expect to benefit as a combined entity. None of the goodwill is expected to be deductible for tax purposes.

We recognized \$1,223.1 million of amortizable intangible assets for customer platforms, customer relationships, developed technology and licensing agreements as a result of our acquisition of MPG. These intangible assets will be amortized over a period ranging from five to 17 years. The intangible assets were valued using primarily the relief from royalty method or the multi-period excess earnings method, both of which utilize significant unobservable inputs. These inputs are defined in the fair value hierarchy as Level 3 inputs, which require management to make estimates and assumptions regarding certain financial measures using forecasted or projected information.

AAM had an existing accounts payable balance of \$12.4 million with MPG as of the date of acquisition. As a result of the acquisition, this pre-existing accounts payable balance was settled and AAM accounted for this settlement separately from the acquisition. This resulted in a \$12.4 million reduction in the purchase price and this portion of the cash paid to acquire MPG has been reflected as an operating cash outflow in our Consolidated Statement of Cash Flows for the year ended December 31, 2017.

Included in Net sales for the period from the acquisition date on April 6, 2017 through December 31, 2017 was approximately \$2,022 million attributable to MPG. Included in Net income attributable to AAM for the period from the acquisition date on April 6, 2017 through December 31, 2017 was approximately \$320 million attributable to MPG, which included a tax benefit of approximately \$227 million as a result of remeasuring our net deferred tax liabilities in the U.S. subsequent to the enactment of the Tax Cuts and Jobs Act. As of December 31, 2017, AAM's consolidated income before income taxes was \$340.0 million, of which \$93.5 million related to MPG.

#### Unaudited Pro Forma Financial Information

Pro forma net sales for AAM, on a combined basis with MPG for the years ended December 31, 2017 and December 31, 2016, were \$7.0 billion and \$6.6 billion, respectively, excluding MPG sales to AAM during those periods. Pro forma net income amounts for the years ended December 31, 2017 and December 31, 2016 were approximately \$400 million and \$220 million, respectively. Pro forma earnings per share amounts for the years ended December 31, 2017 and December 31, 2016 were \$3.51 per share and \$1.95 per share, respectively.

The pro forma net income amounts for the years ended December 31, 2017 and December 31, 2016 have been adjusted by approximately \$20 million for a one-time charge for MPG stock-based compensation that was accelerated and settled on the date of acquisition, approximately \$25 million related to the step-up of inventory to fair value as a result of the acquisition, and approximately \$55 million in acquisition-related costs. This adjustment resulted in a reclassification of approximately \$65 million, net of tax, from pro forma net income for 2017 into pro forma net income for 2016, as we are required to disclose the pro forma amounts as if our acquisition of MPG had been completed on January 1, 2016.

The disclosure of pro forma net sales and earnings is for informational purposes only and does not purport to indicate the results that would actually have been obtained had the merger been completed on the assumed date for the periods presented, or which may be realized in the future.

#### Acquisition of USM Mexico

On March 1, 2017, AAM completed our acquisition of 100% of USM Mexico, a former subsidiary of U.S. Manufacturing Corporation (USM). The purchase price was funded with available cash and the acquisition was accounted for under the acquisition method.

USM Mexico includes USM's operations in Guanajuato, Mexico, which has historically been one of the largest suppliers to AAM's Guanajuato Manufacturing Complex. This acquisition allows AAM to vertically integrate the supply chain and helps ensure continuity of supply for certain parts to our largest manufacturing facility.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The following represents the estimated fair value of the assets acquired and liabilities assumed resulting from the acquisition, as well as the calculation of goodwill:

(in millions)	March 1, 2017
Contractual purchase price	\$162.5
Adjustments to contractual purchase price for capital equipment	4.9
Adjustment to contractual purchase price for settlement of existing accounts payable balance	(22.8 )
Cash acquired	(0.5 )
Adjusted purchase price, net of cash acquired	\$144.1
Accounts receivable	1.1
Inventories	4.8
Prepaid expenses and other	2.4
Property, plant and equipment	38.4
Intangible assets	31.7
Total assets acquired	\$78.4
Accounts payable	10.8
Accrued expenses and other	2.7
Deferred income tax liabilities	1.2
Net assets acquired	\$63.7
Goodwill	\$80.4

The purchase agreement specifies a period of time subsequent to the acquisition date for calculating the final working capital amount of USM Mexico as of the acquisition date. As a result, the purchase price, working capital and goodwill amounts as included in the table above are considered provisional and are subject to adjustment. We expect these provisional amounts to be finalized in the first quarter of 2018. None of the goodwill is expected to be deductible for tax purposes.

AAM had an existing accounts payable balance of \$22.8 million with USM Mexico as of the date of acquisition. As a result of our acquisition, this pre-existing accounts payable balance was settled and AAM accounted for this settlement separately from our acquisition. This resulted in a \$22.8 million reduction in the purchase price and this portion of the cash paid to acquire USM Mexico has been reflected as an operating cash outflow in our Consolidated Statement of Cash Flows for the year ended December 31, 2017.

The operating results of USM Mexico from our acquisition date through December 31, 2017 were insignificant to AAM's Consolidated Statement of Income for the year ended December 31, 2017. Further, we have not disclosed pro forma revenue and earnings for the years ended December 31, 2017 and December 31, 2016, as the operating results of USM Mexico would be insignificant to AAM's consolidated results for these periods.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

#### 4. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill The following table provides a reconciliation of changes in goodwill for the year ended December 31, 2017 and the year ended December 31, 2016:

	Driveline	Metal Forming	Powertrain	Casting	Consolidated
	(in millions)				
Balance as of January 1, 2016	\$130.5	\$23.9	\$—	\$—	\$154.4
Foreign currency translation	(0.4)	—	—	—	(0.4)
Balance as of December 31, 2016	\$130.1	\$23.9	\$—	\$—	\$154.0
Acquisition of MPG	—	515.3	471.6	405.5	1,392.4
Acquisition of USM Mexico	80.4	—	—	—	80.4
Foreign currency translation	0.6	19.7	7.2	—	27.5
Balance as of December 31, 2017	\$211.1	\$558.9	\$478.8	\$405.5	\$1,654.3

Other Intangible Assets As a result of our acquisitions of MPG and USM Mexico, AAM identified and recognized certain intangible assets that are subject to amortization. These intangible assets will be amortized over a period ranging from five to 17 years and the weighted-average amortization period for all intangible assets recognized as a result of these acquisitions is 13.6 years. The intangible assets were valued using primarily the relief from royalty method or the multi-period excess earnings method, both of which utilize significant unobservable inputs. These inputs are defined in the fair value hierarchy as Level 3 inputs, which require management to make estimates and assumptions regarding certain financial measures using forecasted or projected information.

The following table provides a breakout of the major intangible assets acquired by class:

	Estimated Useful Lives (years)	December 31, 2017 (in millions)
MPG		
Customer platforms	14	\$950.0
Customer relationships	16-17	151.8
Technology and other	5-13	121.3
Total MPG		\$1,223.1
USM Mexico		
Technology	13	\$29.5
Customer platforms	13	2.2
Total USM Mexico		\$31.7
Total		\$1,254.8

In the third quarter of 2017, we made measurement period adjustments related to our acquisition of MPG to reflect changes to facts and circumstances that existed as of the acquisition date. These adjustments resulted in a decrease to customer platforms of \$20.0 million and a decrease in customer relationships of \$1.5 million as a result of changes to our third-party valuation and customary post-closing reviews. The impact to amortization expense in our Consolidated

Statements of Income for the twelve months ended December 31, 2017 as a result of adjusting our intangible assets was immaterial.

During 2016, we completed the final stages of implementing upgrades to our global enterprise resource planning (ERP) systems. This implementation included upgrades to many of our existing operating and financial systems. In connection with the development of these ERP systems, we have recorded an intangible asset on our

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Consolidated Balance Sheet. The intangible asset is related to costs incurred to obtain software licenses from a third party, as well as costs to design and develop this internal-use software. This intangible asset will be amortized over the estimated useful life of our ERP systems.

The following table provides a reconciliation of the gross carrying amount and associated accumulated amortization for AAM's total intangible assets, which are all subject to amortization, as of December 31, 2017 and December 31, 2016:

	December 31, 2017			December 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
	(in millions)					
Capitalized computer software	\$35.6	\$ (14.3 )	\$ 21.3	\$31.7	\$ (8.5 )	\$ 23.2
Customer platforms	952.2	(52.9 )	899.3	—	—	—
Customer relationships	151.8	(7.3 )	144.5	—	—	—
Technology and other	150.8	(9.3 )	141.5	—	—	—
Total	\$1,290.4	\$ (83.8 )	\$ 1,206.6	\$31.7	\$ (8.5 )	\$ 23.2

Amortization expense for these intangible assets was \$75.3 million for the year ended December 31, 2017 and \$5.0 million for the year ended December 31, 2016. Estimated amortization expense is approximately \$100 million per year for each of the years 2018 through 2022.

In connection with our e-AAM subsidiary, we have in-process research and development intangible assets, which represent the technology that will be utilized in products to be launched in 2018. Accordingly, we will begin amortizing this asset on a straight-line basis at the start of production through the expected life cycle of the related products, which is expected to be approximately 5-7 years.

The following table provides a reconciliation of changes in the carrying value of our in-process research and development intangible assets:

	December 31, 2017 2016	
	(in millions)	
Beginning balance	\$5.3	\$5.7
Foreign currency translation	0.6 (0.4 )	
Ending balance	\$5.9	\$5.3

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5. LONG-TERM DEBT AND LEASE OBLIGATIONS

Long-term debt, net consists of the following:

	December 31,	
	2017	2016
	(in millions)	
Revolving credit facility	\$—	\$—
Term Loan A Facility	92.5	—
Term Loan B Facility	1,526.8	—
7.75% Notes due 2019	200.0	200.0
6.625% Notes due 2022	550.0	550.0
6.50% Notes due 2027	500.0	—
6.25% Notes due 2025	700.0	—
6.25% Notes due 2021	400.0	400.0
5.125% Notes due 2019	—	200.0
Foreign credit facilities	53.2	60.4
Capital lease obligations	28.3	5.5
Debt	4,050.8	1,415.9
Less: Current portion of long-term debt	5.9	3.3
Long-term debt	4,044.9	1,412.6
Less: Debt issuance costs	75.6	11.7
Long-term debt, net	\$3,969.3	\$1,400.9

**NEW SENIOR SECURED CREDIT FACILITIES** In connection with our acquisition of MPG (the Acquisition) on April 6, 2017, Holdings and AAM, Inc. entered into a credit agreement (the Credit Agreement), among AAM, Inc., as borrower, Holdings, each financial institution party thereto as a lender (the Lenders) and administrative agent, pursuant to which Holdings and certain of its restricted subsidiaries (including certain subsidiaries of MPG acquired as part of the Acquisition) are required to guarantee the borrowings of AAM, Inc. thereunder and Holdings, AAM, Inc. and certain of their restricted subsidiaries are required to pledge their assets (including, without limitation, after-acquired assets), subject to certain exceptions and limitations. In connection with the Credit Agreement, Holdings, AAM, Inc. and certain of their restricted subsidiaries entered into a Collateral Agreement and Guarantee Agreement with the financial institutions party thereto as collateral agent and administrative agent.

Pursuant to the Credit Agreement, the Lenders agreed to provide a \$100.0 million term loan A facility (the Term Loan A Facility), a \$1.55 billion term loan B facility (the Term Loan B Facility) and a \$900 million multi-currency revolving credit facility (the Revolving Credit Facility, and together with the Term Loan A Facility and the Term Loan B Facility, the New Senior Secured Credit Facilities). The proceeds of the Term Loan A Facility and the Term Loan B Facility were used to finance a portion of the consideration for the Acquisition, pay transaction costs, redeem in full MPG Holdco I Inc.'s 7.375% Senior Notes due 2022, and repay the existing indebtedness of AAM, Inc. under its Amended and Restated Credit Agreement, dated as of January 9, 2004, amended and restated as of September 13, 2013 and as further amended, among AAM, Inc., as borrower, Holdings, and each financial institution party thereto as a lender and administrative agent, as well as repay existing indebtedness of MPG under its Credit Agreement, dated as of October 20, 2014 and as amended as of May 8, 2015, among MPG Holdco I Inc., as guarantor, MPG, the subsidiary guarantors party thereto, and each financial institution party thereto as a lender and administrative agent. The proceeds of the Revolving Credit Facility will be used for general corporate purposes. We incurred debt issuance costs of \$54.0 million in 2017 related to the New Senior Secured Credit Facilities.

The Term Loan A Facility and the Revolving Credit Facility will mature on April 6, 2022, and the Term Loan B Facility will mature on April 6, 2024. Borrowings under the New Senior Secured Credit Facilities bear interest at rates based on the applicable Eurodollar rate or alternate base rate, as AAM may elect, in each case plus an applicable margin determined based on AAM's total net leverage ratio. The alternate base rate is the greatest of (a)

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

the prime rate of a major United States financial institution, (b) the Federal Reserve Bank of New York rate plus 0.50% and (c) the adjusted Eurodollar rate plus 1.00%. The applicable margin for Eurodollar-based loans under the New Senior Secured Credit Facilities will be between 1.25% and 2.25% with respect to any loan under the Term Loan A Facility, 2.25% with respect to any loan under the Term Loan B Facility, and between 2.00% and 3.00% with respect to any loan under the Revolving Credit Facility. The applicable margin for loans subject to alternate base rate will be between 0.25% and 1.25% with respect to any loan under the Term Loan A Facility, 1.25% with respect to any loan under the Term Loan B Facility, and between 1.00% and 2.00% with respect to any loan under the Revolving Credit Facility.

The Credit Agreement requires certain mandatory prepayments of outstanding loans under the Term Loan A Facility and the Term Loan B Facility, subject to certain exceptions, based on a percentage of the annual excess cash flow of Holdings and its restricted subsidiaries (with step-downs to 0% based upon the total net leverage ratio, and with no prepayment required if annual excess cash flow is under a specified minimum threshold), the net cash proceeds of certain asset sales and casualty and condemnation events, subject to reinvestment rights and certain other exceptions, and the net cash proceeds of any issuance of debt not otherwise permitted under the Credit Agreement.

The Credit Agreement permits AAM, Inc. to incur incremental term loan borrowings and/or increase commitments under the Revolving Credit Facility, subject to certain limitations and the satisfaction of certain conditions, in an aggregate amount not to exceed (i) \$600 million, plus (ii) certain voluntary prepayments, plus (iii) additional amounts subject to pro forma compliance with a first lien net leverage ratio for Holdings and its restricted subsidiaries.

The Credit Agreement contains customary affirmative and negative covenants, including, among others, financial covenants based on total net leverage and cash interest expense coverage ratios and limitations on the ability of Holdings, AAM, Inc. or their restricted subsidiaries to make certain investments, declare or pay dividends or distributions on capital stock, redeem or repurchase capital stock and certain debt obligations, incur liens, incur indebtedness, or merge, make certain acquisitions or certain sales of assets. The Credit Agreement includes customary events of default, the occurrence of which would permit the lenders to, among other things, declare the principal, accrued interest and other obligations to be immediately due and payable. Upon such default, the lenders may also seek customary remedies with respect to the collateral under the Collateral Agreement.

As of December 31, 2017, we have prepaid \$5.0 million of the outstanding principal on our Term Loan A Facility and \$15.5 million of the outstanding principal on our Term Loan B Facility. These payments satisfy our obligation for principal payments under the Term Loan A Facility and Term Loan B Facility for the next four quarters. As a result, there are no amounts related to the Term Loan A Facility or Term Loan B Facility in the Current portion of long-term debt line item in our Consolidated Balance Sheet as of December 31, 2017.

At December 31, 2017, \$866.2 million was available under the Revolving Credit Facility. This availability reflects a reduction of \$33.8 million for standby letters of credit issued against the facility.

The New Senior Secured Credit Facilities provide back-up liquidity for our foreign credit facilities. We intend to use the availability of long-term financing under the New Senior Secured Credit Facilities to refinance any current maturities related to such debt agreements that are not otherwise refinanced on a long-term basis in their local markets, except where otherwise reclassified to current portion of long-term debt on our Consolidated Balance Sheet.

**FORMER REVOLVING CREDIT FACILITY AND TERM FACILITY** Prior to our acquisition of MPG, we had a revolving credit facility that provided up to \$523.5 million of revolving bank financing commitments through September 13, 2018. The revolving credit agreement was terminated as part of our acquisition of MPG and replaced with the New Senior Secured Credit Facilities.

In addition, the former credit agreement provided for a senior secured term loan A facility in an aggregate principal amount of \$150.0 million (term facility). In 2015, we made principal payments of \$142.5 million on our term facility to prepay all outstanding principal. Upon prepayment, we expensed \$0.8 million in 2015 related to the write-off of the remaining unamortized debt issuance costs related to our term facility that we had been amortizing over the expected life of the borrowing.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

**REPAYMENT OF MPG INDEBTEDNESS** Upon our acquisition of MPG, we assumed approximately \$1.9 billion of existing MPG indebtedness, which we repaid in its entirety on the date of acquisition. This indebtedness was comprised of approximately \$0.2 billion of a Euro denominated term loan, approximately \$1.0 billion of a U.S. dollar denominated term loan and approximately \$0.7 billion of outstanding MPG bonds. Upon settlement of the debt, we paid approximately \$24.6 million of accrued interest. In addition, we expensed \$2.7 million of prepayment premiums related to the extinguishment of MPG's debt, which has been presented in the Debt refinancing and redemption costs line item within our Consolidated Statements of Income for the year ended December 31, 2017.

**6.50% NOTES DUE 2027 AND 6.25% NOTES DUE 2025** On March 23, 2017, we issued \$700.0 million in aggregate principal amount of 6.25% senior notes due 2025 and \$500.0 million in aggregate principal amount of 6.50% senior notes due 2027 (the Notes). Proceeds from the Notes were used primarily to fund the cash consideration related to our acquisition of MPG, related fees and expenses, refinance certain existing indebtedness of MPG and borrowings under our previous revolving credit facility, which has been replaced by our new Revolving Credit Facility, together with borrowings under the New Senior Secured Credit Facilities. We incurred debt issuance costs of \$37.2 million in 2017 related to the Notes.

**5.125% NOTES** In 2013, we issued \$200.0 million of 5.125% senior unsecured notes due 2019 (5.125% Notes). Pursuant to the terms of our 5.125% Notes, in the fourth quarter of 2017, we voluntarily redeemed the full amount of the 5.125% Notes. This resulted in a principal payment of \$200.0 million, and a payment of \$3.1 million in accrued interest. We also expensed \$0.8 million in the fourth quarter of 2017 for the write-off of the remaining unamortized debt issuance costs that we had been amortizing over the expected life of the borrowing.

**LEASES** We lease certain facilities and furniture under capital leases expiring at various dates. The gross asset cost of our capital leases was \$10.1 million and \$8.8 million at December 31, 2017 and 2016, respectively. The net book value included in property, plant and equipment, net on the balance sheet was \$5.3 million and \$5.5 million at December 31, 2017 and 2016, respectively. The weighted-average interest rate on these capital lease obligations at December 31, 2017 was 16.0%.

We also lease certain manufacturing machinery and equipment, commercial office and production facilities, vehicles and other assets under operating leases expiring at various dates. Future minimum payments under non-cancelable operating leases are as follows: \$26.3 million in 2018, \$20.0 million in 2019, \$18.2 million in 2020, \$12.2 million in 2021, and \$9.8 million in 2022. Our total expense relating to operating leases was \$28.6 million, \$26.9 million and \$25.3 million in 2017, 2016 and 2015, respectively.

**FOREIGN CREDIT FACILITIES** We utilize local currency credit facilities to finance the operations of certain foreign subsidiaries. These credit facilities, some of which are guaranteed by Holdings and/or AAM, Inc., expire at various dates through July 2019. At December 31, 2017, \$53.2 million was outstanding under these facilities and an additional \$159.7 million was available. In 2017, we increased our foreign credit capacity to support our global operations, primarily in China and Mexico. At December 31, 2016, \$60.4 million was outstanding under these facilities and an additional \$62.0 million was available.

**DEBT MATURITIES** Aggregate maturities of long-term debt are as follows (in millions):

2018	\$52.2
2019	227.7
2020	26.3
2021	426.5
2022	630.2

Thereafter 2,687.9  
Total \$4,050.8

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

**INTEREST EXPENSE AND INVESTMENT INCOME** Interest expense was \$195.6 million in 2017, \$93.4 million in 2016 and \$99.2 million in 2015. The increase in interest expense in 2017, as compared to 2016, reflects the increase in the amount of indebtedness in connection with our acquisition of MPG. The decrease in interest expense in 2016, as compared to 2015, reflects the decrease in our average outstanding borrowings.

We capitalized interest of \$18.3 million in 2017, \$6.5 million in 2016 and \$4.5 million in 2015. The weighted-average interest rate of our long-term debt outstanding at December 31, 2017 was 5.7% as compared to 6.6% and 6.5% at December 31, 2016 and 2015, respectively.

Investment income was \$2.9 million in 2017 and 2016, and \$2.6 million in 2015. Investment income includes interest earned on cash and cash equivalents and realized and unrealized gains and losses on our short-term investments during the period.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

6. DERIVATIVES AND RISK MANAGEMENT

**DERIVATIVE FINANCIAL INSTRUMENTS** In the normal course of business, we are exposed to market risk associated with changes in foreign currency exchange rates and interest rates. To manage a portion of these inherent risks, we may purchase certain types of derivative financial instruments based on management's judgment of the trade-off between risk, opportunity and cost. We do not hold or issue derivative financial instruments for trading or speculative purposes. The ineffective portion of any hedge is included in current earnings. The impact of hedge ineffectiveness was not significant in any of the periods presented.

**CURRENCY DERIVATIVE CONTRACTS** From time to time, we use foreign currency forward and option contracts to reduce the effects of fluctuations in exchange rates relating to the Mexican Peso, Euro, Brazilian Real, British Pound Sterling, Thai Baht, Swedish Krona, Chinese Yuan, Polish Zloty and Indian Rupee. We had currency forward and option contracts outstanding with a notional amount of \$162.2 million and \$156.0 million at December 31, 2017 and 2016, respectively, that hedge our exposure to changes in foreign currency exchange rates for certain payroll expenses into the second quarter of 2020 and the purchase of certain direct and indirect inventory and other working capital items into the third quarter of 2018.

**VARIABLE-TO-FIXED INTEREST RATE SWAP** In the second quarter of 2017, we entered into a variable-to-fixed interest rate swap to reduce the variability of cash flows associated with interest payments on a variable rate debt. As of December 31, 2017, we have the following notional amounts hedged in relation to our variable-to-fixed interest rate swap: \$750.0 million through May 2018, \$600.0 million through May 2019, \$450.0 million through May 2020 and \$200.0 million through May 2021.

The following table summarizes the reclassification of pre-tax derivative gains (losses) into net income from accumulated other comprehensive income (loss) for those derivative instruments designated as cash flow hedges under Accounting Standards Codification 815 - Derivatives and Hedging (ASC 815):

	Location of Gain (Loss) Reclassified into Net Income	Loss Reclassified During the Twelve Months Ended December 31,			Gain/(Loss) Expected to be Reclassified During the Next 12 Months
		2017	2016	2015	
		(in millions)			
Currency forward contracts	Cost of Goods Sold	\$(5.3)	\$(10.5)	\$(10.9)	\$ (6.0 )
Variable-to-fixed interest rate swap	Interest Expense	—	—	—	0.7

See Note 13 - Reclassifications Out of Accumulated Other Comprehensive Income (Loss) for amounts recognized in other comprehensive income (loss) during the years ended December 31, 2017, December 31, 2016 and December 31, 2015.

The following table summarizes the amount and location of gains (losses) recognized in the Consolidated Statement of Income for those derivative instruments not designated as hedging instruments under ASC 815:

Location of Gain/(Loss) Recognized in Net Income	Gain/(Loss) Recognized During the Twelve Months

	Ended December 31,		
	2017	2016	2015
	(in millions)		
Currency forward contracts Cost of Goods Sold	\$2.7	\$(5.8)	\$(4.0)
Currency forward contracts Other Income (Expense), Net	(0.1 )	(0.7 )	(1.6 )
Currency option contracts Cost of Goods Sold	0.8	—	—

**CONCENTRATIONS OF CREDIT RISK** In the normal course of business, we provide credit to customers. We periodically evaluate the creditworthiness of our customers and we maintain reserves for potential credit losses.

Sales to GM were approximately 47% of our consolidated net sales in 2017, 67% in 2016, and 66% in 2015. Accounts and other receivables due from GM were \$466.8 million at year-end 2017 and \$369.1 million at year-end

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

2016. Sales to FCA US LLC (FCA), were approximately 14% of our consolidated net sales in 2017, 18% in 2016 and 20% in 2015. Accounts and other receivables due from FCA were \$129.0 million at year-end 2017 and \$87.3 million at year-end 2016. No other single customer accounted for more than 10% of our consolidated net sales in any year presented.

In addition, our total GM postretirement cost sharing asset was \$265.5 million as of December 31, 2017 and \$249.0 million as of December 31, 2016. See Note 8 - Employee Benefit Plans for more detail on this cost sharing asset.

We diversify the concentration of invested cash and cash equivalents among different financial institutions and we monitor the selection of counterparties to other financial instruments to avoid unnecessary concentrations of credit risk.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

## 7. FAIR VALUE

The fair value accounting guidance defines fair value 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 definition is based on an exit price rather than an entry price, regardless of whether the entity plans to hold or sell the asset. This guidance also establishes a fair value hierarchy to prioritize inputs used in measuring fair value as follows:

- Level 1: Observable inputs such as quoted prices in active markets;
- Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

**FINANCIAL INSTRUMENTS** The estimated fair values of our financial assets and liabilities that are recognized at fair value on a recurring basis, using available market information and other observable data are as follows:

Balance Sheet Classification	December 31, 2017		December 31, 2016		Input
	Carrying Amount	Fair Value	Carrying Amount	Fair Value	
Cash equivalents	\$72.8	\$72.8	\$187.2	\$187.2	Level 1
Prepaid expenses and other					
Cash flow hedges - currency forward contracts	0.1	0.1	—	—	Level 2
Cash flow hedges - variable-to-fixed interest rate swap	1.3	1.3	—	—	Level 2
Other assets and deferred charges					
Cash flow hedges - currency forward contracts	0.2	0.2	—	—	Level 2
Cash flow hedges - variable-to-fixed interest rate swap	0.9	0.9	—	—	Level 2
Accrued expenses and other					
Cash flow hedges - currency forward contracts	6.0	6.0	12.3	12.3	Level 2
Nondesignated - currency forward contracts	2.8	2.8	1.4	1.4	Level 2
Postretirement benefits and other long-term liabilities					
Cash flow hedges - currency forward contracts	2.6	2.6	11.4	11.4	Level 2
Cash flow hedges - variable-to-fixed interest rate swap	0.3	0.3	—	—	Level 2

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The carrying values of our cash, accounts receivable, accounts payable and accrued liabilities approximate their fair values due to the short-term maturities of these instruments. The carrying values of our borrowings under the foreign credit facilities approximate their fair values due to the frequent resetting of the interest rates. We estimated the fair value of our outstanding debt using available market information and other observable data to be as follows:

	December 31, 2017		December 31, 2016		
	Carrying Amount	Fair Value	Carrying Amount	Fair Value	Input
	(in millions)				
Revolving Credit Facility	\$ —	\$ —	\$ —	\$ —	Level 2
Term Loan A Facility	92.5	92.5	—	—	Level 2
Term Loan B Facility	1,526.3	1,528.7	—	—	Level 2
7.75% Notes due 2019	200.0	217.5	200.0	221.0	Level 2
6.625% Notes due 2022	550.0	570.2	550.0	566.1	Level 2
6.50% Notes due 2027	500.0	527.5	—	—	Level 2
6.25% Notes due 2025	700.0	736.8	—	—	Level 2
6.25% Notes due 2021	400.0	410.0	400.0	412.0	Level 2
5.125% Notes due 2019	—	—	200.0	201.7	Level 2

Investments in our defined benefit pension plans are stated at fair value. See Note 8 - Employee Benefit Plans for additional fair value disclosures of our pension plan assets.



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

8. EMPLOYEE BENEFIT PLANS

**PENSION AND OTHER POSTRETIREMENT DEFINED BENEFIT PLANS** We sponsor various qualified and non-qualified defined benefit pension plans for our eligible associates. We also maintain hourly and salaried benefit plans that provide postretirement medical, dental, vision and life insurance benefits (OPEB) to our eligible retirees and their dependents in the U.S.

AAM and GM share proportionally in the cost of OPEB for eligible retirees based on the length of service an employee had with AAM and GM. We have included in our OPEB obligation the amounts expected to be received pursuant to this agreement of \$265.5 million and \$249.0 million at December 31, 2017 and December 31, 2016, respectively. We have also recorded a corresponding asset for these amounts on our Consolidated Balance Sheet, \$13.3 million that is classified as a current asset and \$252.2 million that is classified as a noncurrent asset as of December 31, 2017.

Actuarial valuations of our benefit plans were made as of December 31, 2017 and 2016. The primary weighted-average assumptions used in the year-end valuation of our principal plans appear in the following table. The U.S. discount rates are based on an actuarial review of a hypothetical portfolio of long-term, high quality corporate bonds matched against the expected payment stream for each of our plans. The U.K. discount rates are based on hypothetical yield curves developed from corporate bond yield information within each regional market. The assumptions for expected return on plan assets are based on future capital market expectations for the asset classes represented within our portfolios and a review of long-term historical returns. The rates of increase in compensation and health care costs are based on current market conditions, inflationary expectations and historical information.

	Pension Benefits				OPEB				
	2017		2016		2015		2017	2016	2015
	U.S.	U.K.	U.S.	U.K.	U.S.	U.K.			
Discount rate	3.65%	2.75%	4.15%	2.70%	4.40%	3.90%	3.65%	4.20%	4.45%
Expected return on plan assets	7.45%	5.10%	7.50%	5.00%	7.50%	5.00%	N/A	N/A	N/A
Rate of compensation increase	4.00%	3.40%	4.00%	3.45%	4.00%	3.30%	4.00%	4.00%	4.00%

The accumulated benefit obligation for all defined benefit pension plans was \$807.9 million and \$702.2 million at December 31, 2017 and December 31, 2016, respectively. As of December 31, 2017, the accumulated benefit obligation for our underfunded defined benefit pension plans was \$673.8 million, the projected benefit obligation was \$687.0 million and the fair value of assets for these plans was \$546.4 million.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The following table summarizes the changes in projected benefit obligations and plan assets and reconciles the funded status of the benefit plans, which is the net benefit plan liability:

	Pension Benefits		OPEB	
	December 31,		December 31,	
	2017	2016	2017	2016
	(in millions)			
Change in benefit obligation				
Benefit obligation at beginning of year	\$717.6	\$693.1	\$571.7	\$588.4
Service cost	3.6	2.9	0.3	0.3
Interest cost	28.9	28.8	13.3	14.0
Plan amendments	0.5	—	—	—
Actuarial loss (gain)	28.1	54.8	22.6	(6.8 )
Change in GM portion of OPEB obligation	—	—	16.5	(7.2 )
Participant contributions	0.3	0.3	—	—
Settlements	(14.3 )	—	—	—
Benefit payments	(40.8 )	(38.1 )	(12.5 )	(17.0 )
MPG acquisition / business combination	82.3	—	1.4	—
Currency fluctuations	17.8	(24.2 )	—	—
Net change	106.4	24.5	41.6	(16.7 )
Benefit obligation at end of year	\$824.0	\$717.6	\$613.3	\$571.7
Change in plan assets				
Fair value of plan assets at beginning of year	\$611.3	\$612.8	\$—	\$—
Actual return on plan assets	74.9	61.7	—	—
Employer contributions	4.4	2.3	12.5	17.0
Participant contributions	0.3	0.3	—	—
Benefit payments	(40.8 )	(38.1 )	(12.5 )	(17.0 )
Settlements	(14.3 )	—	—	—
MPG acquisition / business combination	49.9	—	—	—
Currency fluctuations	16.5	(27.7 )	—	—
Net change	90.9	(1.5 )	—	—
Fair value of plan assets at end of year	\$702.2	\$611.3	\$—	\$—

Amounts recognized in our Consolidated Balance Sheets are as follows:

	Pension Benefits		OPEB	
	December 31,		December 31,	
	2017	2016	2017	2016
	(in millions)			
Noncurrent assets	\$18.9	\$12.9	\$—	\$—
Current liabilities	(6.0 )	(5.7 )	(30.3 )	(29.1 )
Noncurrent liabilities	(134.7 )	(113.5 )	(583.0 )	(542.6 )
Net liability	\$(121.8)	\$(106.3)	\$(613.3)	\$(571.7)



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Pre-tax amounts recorded in accumulated other comprehensive income (loss) (AOCI), not yet recognized in net periodic benefit cost (credit) as of December 31, 2017 and 2016, consists of:

	Pension Benefits		OPEB	
	December 31, 2017	December 31, 2016	December 31, 2017	December 31, 2016
	(in millions)			
Net actuarial gain (loss)	\$(237.4)	\$(247.9)	\$(13.5)	\$8.5
Net prior service credit (cost)	(0.1 )	0.5	7.2	9.9
Total amounts recorded	\$(237.5)	\$(247.4)	\$(6.3 )	\$18.4

The components of net periodic benefit cost (credit) are as follows:

	Pension Benefits			OPEB		
	2017	2016	2015	2017	2016	2015
	(in millions)					
Service cost	\$3.6	\$2.9	\$3.2	\$0.3	\$0.3	\$0.4
Interest cost	28.9	28.8	28.6	13.3	14.0	15.0
Expected asset return	(44.0)	(42.1)	(42.0)	—	—	—
Amortized actuarial loss	7.1	5.5	6.0	0.6	0.5	0.8
Amortized prior service credit	(0.1 )	(0.1 )	(0.1 )	(2.7 )	(2.7 )	(2.7 )
Settlement charge	3.2	—	—	—	—	—
Net periodic benefit cost (credit)	\$(1.3)	\$(5.0)	\$(4.3)	\$11.5	\$12.1	\$13.5

Our postretirement cost sharing asset from GM is measured on the same basis as the portion of the obligation to which it relates. The actuarial gains and losses related to the GM portion of the OPEB obligation are recognized immediately in the Consolidated Statement of Income as an offset against the gains and losses related to the change in the corresponding GM postretirement cost sharing asset. These items are presented net in the change in benefit obligation and net periodic benefit cost components disclosed above. Remaining actuarial gains and losses are deferred and amortized over the expected future service periods of the active participants or the remaining life expectancy of the inactive participants.

The estimated net actuarial loss and prior service cost for the defined benefit pension plans that is expected to be amortized from AOCI into net periodic benefit credit in 2018 are \$8.9 million and \$0.2 million, respectively. The estimated net actuarial loss and prior service credit for the other defined benefit postretirement plans that is expected to be amortized from AOCI into net periodic benefit cost in 2018 are \$0.8 million and \$2.7 million, respectively.

For measurement purposes, a weighted average annual increase in the per-capita cost of covered health care benefits of 7.00% was assumed for 2018. The rate was assumed to decrease gradually to 5.0% by 2026 and to remain at that level thereafter. Health care cost trend rates have a significant effect on the amounts reported for the health care plans. A 1.0% increase in the assumed health care cost trend rate would have increased total service and interest cost in 2017 and the postretirement obligation, net of GM cost sharing, at December 31, 2017 by \$1.4 million and \$38.2 million, respectively. A 1.0% decrease in the assumed health care cost trend rate would have decreased total service and interest cost in 2017 and the postretirement obligation, net of GM cost sharing, at December 31, 2017 by \$1.2 million and \$31.8 million, respectively.

The expected future pension and other postretirement benefits to be paid, net of GM cost sharing, for each of the next five years and in the aggregate for the succeeding five years thereafter are as follows: \$61.0 million in 2018; \$58.8

million in 2019; \$60.7 million in 2020; \$61.8 million in 2021; \$61.1 million in 2022 and \$326.0 million for 2023 through 2027. These amounts were estimated using the same assumptions that were used to measure our 2017 year-end pension and OPEB obligations and include an estimate of future employee service.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

**Contributions** We contributed \$1.1 million to our pension trusts in 2017. In 2015, we voluntarily contributed \$18.3 million to one of our U.K. pension trusts to substantially satisfy our estimated U.K. regulatory funding requirements for 2016 through 2018. Due to the availability of our pre-funded pension balances (previous contributions in excess of prior required pension contributions) related to certain of our U.S. pension plans, we expect our regulatory pension funding requirements in 2018 to be approximately \$2 million. We expect our cash payments, net of GM cost sharing, for OPEB to be approximately \$17 million in 2018.

**Pension plan assets** The weighted-average asset allocations of our pension plan assets at December 31, 2017 and 2016 appear in the following table. The asset allocation for our plans is developed in consideration of the demographics of the plan participants and expected payment stream of the benefit obligation.

	U.S.			U.K.		
	2017	2016	Target Allocation	2017	2016	Target Allocation
Equity securities	42.7 %	42.0 %	30% - 65%	28.6 %	27.3 %	25% - 35%
Fixed income securities	47.5	48.0	35% - 55%	57.9	57.0	55% - 65%
Alternative assets	8.2	9.0	5% - 10%	11.2	11.7	5% - 15%
Cash	1.6	1.0	0% - 5%	2.3	4.0	0% - 5%
Total	100.0%	100.0%		100.0%	100.0%	

The primary objective of our pension plan assets is to provide a source of retirement income for participants and beneficiaries. Our primary financial objectives for the pension plan assets have been established in conjunction with a comprehensive review of our current and projected financial requirements. These objectives include having the ability to pay all future benefits and expenses when due, maintaining flexibility and minimizing volatility. These objectives are based on a long-term investment horizon.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

**Defined Benefit Pension Plan Assets** Investments in our defined benefit plans are stated at fair value. Level 1 assets are valued using quoted market prices that represent the asset value of the shares held by the trusts. The level 2 assets are investments in pooled funds, which are valued using a model to reflect the valuation of their underlying assets that are publicly traded with observable values. The fair values of our pension plan assets are as follows:

December 31, 2017

Asset Categories	Level 1	Level 2	Level 3	Total
	(in millions)			
Cash and Cash Equivalents	\$10.1	\$2.8	\$	-\$12.9
Equity				
U.S. Large Cap	92.0	6.3	—	98.3
U.S. Small/Mid Cap	44.0	1.2	—	45.2
World Equity	123.5	6.2	—	129.7
Fixed Income Securities				
Government & Agencies	81.3	46.4	—	127.7
Corporate Bonds - Investment Grade	150.5	4.2	—	154.7
Corporate Bonds - Non-investment Grade	24.8	1.8	—	26.6
Emerging Market Debt	25.2	1.2	—	26.4
Other	8.7	8.1	—	16.8
Other				
Property Funds <sup>(a)</sup>	—	—	—	52.4
Liquid Alternatives Fund <sup>(a)</sup>	—	—	—	4.6
Structured Credit Fund <sup>(a)</sup>	—	—	—	6.0
Multi Strategy Hedge Fund <sup>(a)</sup>	—	—	—	0.9
Total Plan Assets	\$560.1	\$78.2	\$	-\$702.2

December 31, 2016

Asset Categories	Level 1	Level 2	Level 3	Total
	(in millions)			
Cash and Cash Equivalents	\$10.4	\$—	\$	-\$10.4
Equity				
U.S. Large Cap	90.9	—	—	90.9
U.S. Small/Mid Cap	37.3	—	—	37.3
World Equity	106.5	—	—	106.5
Fixed Income Securities				
Government & Agencies	74.7	33.1	—	107.8
Corporate Bonds - Investment Grade	143.7	—	—	143.7
Corporate Bonds - Non-investment Grade	26.2	—	—	26.2
Emerging Market Debt	24.2	—	—	24.2
Other	5.0	—	—	5.0
Other				
Property Funds <sup>(a)</sup>	—	—	—	45.5
Liquid Alternatives Fund <sup>(a)</sup>	—	—	—	—
Structured Credit Fund <sup>(a)</sup>	—	—	—	5.0
Multi Strategy Hedge Fund <sup>(a)</sup>	—	—	—	8.8
Total Plan Assets	\$518.9	\$33.1	\$	-\$611.3

(a) In accordance with Subtopic 820-10, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the Consolidated Balance Sheets.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

**DEFINED CONTRIBUTION PLANS** Most of our salaried and hourly U.S. associates are eligible to participate in voluntary savings plans. Our maximum match is 50% of eligible associates' contribution up to 10% of their eligible salary. Matching contributions amounted to \$9.3 million in 2017, \$5.2 million in 2016 and \$4.6 million in 2015. Certain U.S. salaried associates are eligible annually to receive an additional AAM Retirement Contribution (ARC) benefit between 3% to 5% of eligible salary, depending on years of service. We made ARC contributions of \$6.0 million, \$5.8 million and \$5.3 million in 2017, 2016 and 2015, respectively.

Certain UAW represented associates at our legacy U.S. locations are eligible for a Company match on associate contributions made to the voluntary savings plans. Our maximum match is 25% of hourly associates' contribution up to the first 6% of their contributions. Matching contributions amounted to \$0.7 million in 2017, \$0.4 million in 2016 and \$0.1 million in and 2015. Certain UAW represented associates are also eligible to receive an ARC benefit of 5% of eligible wages. We made ARC contributions of \$1.1 million in 2017, \$1.9 million in 2016 and \$2.5 million in 2015 related to these associates.

**DEFERRED COMPENSATION PLAN** Certain U.S. associates are eligible to participate in a non-qualified deferred compensation plan. Payments of \$0.6 million, \$0.5 million and \$0.7 million have been made in 2017, 2016 and 2015, respectively, to eligible associates that have elected distributions.

At December 31, 2017 and 2016, our deferred compensation liability was \$6.0 million and \$5.3 million, respectively. Due to the changes in the value of this deferred compensation plan we increased our liability by \$0.7 million, \$0.2 million and \$0.1 million in 2017, 2016 and 2015, respectively.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

## 9. STOCK-BASED COMPENSATION

At December 31, 2017, we had stock-based awards outstanding under stock incentive compensation plans approved by our stockholders. Under these plans, shares have been authorized for issuance to our directors, officers and certain other associates in the form of unvested restricted stock units, performance shares or other awards that are based on the value of our common stock. Shares available for future grants at December 31, 2017 were 3.6 million. The current stock plan will expire in April 2022.

**RESTRICTED STOCK UNITS** We have awarded restricted stock units (RSUs). Compensation expense associated with RSUs settled in stock is recorded to paid-in-capital ratably over the three-year vesting period.

The following table summarizes activity relating to our RSUs:

	Number of Shares/Units	Weighted-Average Grant Date Fair Value per Share/Unit
Outstanding at January 1, 2015	1.6	\$ 14.54
Granted	0.5	25.21
Vested	(0.3)	11.03
Canceled	(0.1)	19.99
Outstanding at December 31, 2015	1.7	\$ 18.19
Granted	0.9	15.41
Vested	(0.7)	13.23
Canceled	(0.1)	18.75
Outstanding at December 31, 2016	1.8	\$ 18.70
Granted	1.3	18.09
Vested	(0.4)	19.70
Canceled	(0.2)	16.79
Outstanding at December 31, 2017	2.5	\$ 18.35

As of December 31, 2017, unrecognized compensation cost related to unvested RSUs totaled \$19.5 million. The weighted average period over which this cost is expected to be recognized is approximately two years. In 2017 and 2016, the total fair market value of RSUs vested was \$8.8 million and \$10.5 million, respectively.

**PERFORMANCE SHARES** As of December 31, 2017, we have performance shares (PS) outstanding under our 2012 Omnibus Incentive Plan. We grant performance shares payable in stock to officers which vest in full over a three-year performance period. These grants are based equally on a total shareholder return (TSR) measure and AAM's three-year adjusted earnings before interest, taxes, depreciation and amortization (EBITDA) margin. The TSR metric compares our TSR over the three-year performance period relative to the TSR of our pre-defined competitor peer group. Based on these EBITDA and relative TSR performance metrics, the number of performance shares that will vest will be between 0% and 200% of the grant date amount. Share price appreciation and dividends paid are measured over the performance period to determine TSR. As these awards are settled in stock, the compensation expense booked ratably over the vesting period is recorded to paid-in-capital.



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The following table summarizes activity relating to our performance shares:

	Weighted Average Number of Shares (in millions, except per share data)	Grant Date Fair Value per Share
<b>EBITDA Awards</b>		
Outstanding at January 1, 2015	0.2	\$ 27.66
Granted	0.1	37.68
Vested	—	—
Canceled	—	—
Outstanding at December 31, 2015	0.3	\$ 32.27
Granted	0.2	28.04
Vested	—	—
Canceled	—	—
Outstanding at December 31, 2016	0.5	\$ 30.19
Granted	0.2	39.01
Vested	(0.1)	27.73
Canceled	—	—
Outstanding at December 31, 2017	0.6	\$ 33.91
<b>TSR Awards</b>		
Outstanding at January 1, 2015	0.2	\$ 21.11
Granted	0.1	31.22
Vested	—	—
Canceled	—	—
Outstanding at December 31, 2015	0.3	\$ 25.77
Granted	0.2	13.16
Vested	—	—
Canceled	—	—
Outstanding at December 31, 2016	0.5	\$ 19.55
Granted	0.2	24.58
Vested	(0.1)	22.78
Canceled	—	—
Outstanding at December 31, 2017	0.6	\$ 20.93

We estimate the fair value of our EBITDA performance shares on the date of grant using our estimated three-year adjusted EBITDA margin, based on AAM's budget and long-range plan assumptions at that time, and adjust quarterly as necessary. We estimate the fair value of our TSR performance shares on the date of grant using the Monte Carlo simulation approach. The Monte Carlo simulation approach utilizes inputs on volatility assumptions, risk free rates, the price of the Company's and our competitor peer group's common stock and their correlation as of each valuation date. Volatility assumptions are based on historical and implied volatility measurements.

Based on the current fair value, the estimated unrecognized compensation cost related to unvested PS totaled \$11.8 million, as of December 31, 2017. The weighted-average period over which this cost is expected to be recognized is approximately two years.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

10. INCOME TAXES

On December 22, 2017, the Tax Cuts and Jobs Act (the 2017 Act) was enacted in the United States. The following is a summary of the key provisions of the 2017 Act:

- Reduces the U.S. federal statutory income tax rate for corporations from 35% to 21%
- Requires companies to pay a one-time transition tax (Transition Tax) on certain foreign earnings for which U.S. income tax was previously deferred
- Generally eliminates U.S. federal income taxes on dividends from foreign subsidiaries
- Requires a current inclusion in U.S. federal taxable income of certain earnings of controlled foreign corporations
- Eliminates the corporate alternative minimum tax (AMT) and changes how existing AMT credits can be realized
- Creates a new limitation on deductible net interest expense incurred by U.S. corporations
- Allows for immediate expensing of certain capital investments in the U.S. for the period September 27, 2017 through December 31, 2022
- Creates a new base erosion anti-abuse minimum tax (BEAT)

Following the enactment of the 2017 Act, the Securities and Exchange Commission issued Staff Accounting Bulletin (SAB) 118 to provide guidance on the accounting and reporting impacts of the 2017 Act. SAB 118 states that companies should account for changes related to the 2017 Act in the period of enactment if all information is available and the accounting can be completed. In situations where companies do not have enough information to complete the accounting in the period of enactment, a company must either 1) record an estimated provisional amount if the impact of the change can be reasonably estimated; or 2) continue to apply the accounting guidance that was in effect immediately prior to the 2017 Act if the impact of the change cannot be reasonably estimated. If estimated provisional amounts are recorded, SAB 118 provides a measurement period of no longer than one year during which companies should adjust those amounts as additional information becomes available.

In connection with our preliminary analysis of the impacts of the 2017 Act, we have recorded a discrete net tax benefit of approximately \$20 million for the year ended December 31, 2017. This net benefit primarily consists of a benefit of approximately \$110 million for the remeasurement of our net deferred tax liabilities as a result of the change in tax rate and a benefit of \$18 million related to the reduction of a previously recorded deferred tax liability on certain foreign earnings, partially offset by expense of approximately \$108 million related to the Transition Tax.

These adjustments were estimates based on information currently available and, in accordance with the guidance in SAB 118, these amounts are provisional and subject to adjustment as we obtain additional information and complete our analysis. The additional information required is as follows:

**Reduction of U.S. federal corporate tax rate:** While we were able to make a reasonable estimate of the impact of the reduction in the corporate tax rate, the final impact may be affected by other elements related to the 2017 Act including, but not limited to, our calculation of deemed repatriation of deferred foreign income and the state tax effect of adjustments made to federal temporary differences.

**Transition Tax:** In order to finalize the impact of the Transition Tax, we must determine, in addition to other factors, the amount of earnings of certain foreign subsidiaries, as well as the amount of non-U.S. income taxes paid on these earnings. In the fourth quarter of 2017, we were able to make a reasonable estimate, however, we are continuing to gather information to more precisely calculate the Transition Tax.

For the remaining provisions of the 2017 Act, as listed above, we either did not have sufficient information to estimate the impact of the provision for 2017, or the item became effective on or after January 1, 2018 and did not require

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accounting treatment in 2017. We are currently analyzing the impact of these provisions.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Income before income taxes for U.S. and non-U.S. operations was as follows:

	2017	2016	2015
	(in millions)		
U.S. income (loss)	\$(37.1)	\$90.0	\$88.3
Non - U.S. income	377.1	209.0	184.4
Total income before income taxes	\$340.0	\$299.0	\$272.7

The following is a summary of the components of our provisions for income taxes:

	2017	2016	2015
	(in millions)		
Current			
Federal	\$87.1	\$0.4	\$0.5
Other state and local	(0.7 )	—	0.2
Foreign	62.4	27.5	10.8
Total current	\$148.8	\$27.9	\$11.5
Deferred			
Federal	\$(122.3)	\$31.2	\$26.4
Other state and local	(17.0 )	—	—
Foreign	(7.0 )	(0.8 )	(0.8 )
Total deferred	(146.3 )	30.4	25.6
Total income tax expense	\$2.5	\$58.3	\$37.1

The following is a reconciliation of our provision for income taxes to the expected amounts using statutory rates:

	2017	2016	2015
Federal statutory	35.0 %	35.0 %	35.0 %
Foreign income taxes	(28.3)	(20.5)	(17.6)
Change in enacted tax rate	(31.6)	(0.2 )	—
Transition tax	31.9	—	—
State and local	(1.9 )	—	0.1
Tax credits	(2.6 )	(1.1 )	(1.3 )
Valuation allowance	(1.8 )	0.4	2.6
U.S. tax on unremitted foreign earnings	(5.5 )	0.2	0.2
Uncertain tax positions	4.0	0.5	(5.7 )
Other	1.5	5.2	0.3
Effective income tax rate	0.7 %	19.5 %	13.6 %

In 2017, 2016 and 2015, our income tax expense and effective income tax rate, as compared to the U.S. federal statutory rate of 35%, reflect the impact of favorable foreign tax rates, partially offset by our inability to realize a tax benefit for current foreign losses.

Our income tax expense and effective income tax rate for 2017 were lower than our income tax expense and effective income tax rate for 2016 primarily as a result of an increase in the proportionate share of earnings attributable to lower tax rate jurisdictions. In addition, subsequent to the acquisition of MPG, we re-evaluated our valuation allowance position with regard to jurisdictions in which consolidated state tax returns are filed and recorded an income tax benefit for the year ended December 31, 2017. This was partially offset by a discrete tax adjustment related to certain non-deductible transaction and acquisition-related costs.





AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Further, we recognized a net benefit in 2017 related to accounting for the following provisions of the Tax Cuts and Jobs Act: 1) remeasurement of our net deferred tax liabilities in the U.S. from 35% to 21%; and 2) a one-time Transition Tax on certain foreign earnings for which U.S. tax was previously deferred, which also resulted in a benefit related to the reduction of a previously recorded deferred tax liability on these foreign earnings.

Our income tax expense and effective income tax rate for 2016 were higher than our income tax expense and effective income tax rate in 2015 primarily due to the impact of an \$11.5 million reduction in tax expense related to uncertain tax positions attributable to transfer pricing in the fourth quarter of 2015.

As of December 31, 2017, we have refundable income taxes of \$30.0 million, of which \$9.6 million was classified as Prepaid expenses and other and \$20.4 million was classified as Other assets and deferred charges on our Consolidated Balance Sheet. At December 31, 2016, we had refundable income taxes of \$3.4 million classified as Prepaid expenses and other on our Consolidated Balance Sheet. We also have income taxes payable of \$11.6 million and \$0.9 million classified as Other accrued expenses on our Consolidated Balance Sheet as of December 31, 2017 and 2016, respectively.

The following is a summary of the significant components of our deferred tax assets and liabilities:

	December 31,	
	2017	2016
	(in millions)	
Deferred tax assets		
Employee benefits	\$ 155.9	\$ 219.3
Inventory	20.8	20.3
Net operating loss (NOL) carryforwards	172.4	126.7
Tax credit carryforwards	96.4	35.1
Capital allowance carryforwards	11.2	11.6
Fixed assets	5.1	15.9
Deferred revenue	14.7	19.3
Capitalized expenditures	35.4	71.9
Other	26.9	20.5
Valuation allowances	(180.4 )	(164.8 )
Deferred tax assets	\$358.4	\$375.8
Deferred tax liabilities		
U.S. tax on unremitted foreign earnings	(2.4 )	—
Other intangible assets	(281.6 )	—
Fixed assets	(120.3 )	(23.0 )
Other	(18.7 )	—
Deferred tax liabilities	\$(423.0)	\$(23.0)
Deferred tax asset (liability), net	\$(64.6 )	\$352.8

Deferred tax assets and liabilities recognized in our Consolidated Balance Sheets are as follows:

	December 31,	
	2017	2016
	(in millions)	
U.S. federal and state deferred tax asset (liability), net	\$(79.4)	\$340.9
Other foreign deferred tax asset, net	14.8	11.9

Deferred tax asset (liability), net	\$(64.6)	\$352.8
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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

**DEFERRED INCOME TAX ASSETS AND LIABILITIES AND VALUATION ALLOWANCES** The deferred income tax assets and liabilities summarized above reflect the impact of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the basis of such assets and liabilities as measured by tax laws. ASC 740 - Income Taxes states that companies must measure deferred tax amounts at the rate at which they are expected to be realized. As a result of the enactment of the 2017 Act, we have remeasured our deferred tax assets and liabilities in the U.S. from the prior 35% rate to the new 21% rate at December 31, 2017.

As of December 31, 2017 and December 31, 2016, we had deferred tax assets from domestic and foreign NOL and tax credit carryforwards of \$280.0 million and \$173.4 million, respectively. Approximately \$118.2 million of the deferred tax assets at December 31, 2017 relate to NOL and tax credits that can be carried forward indefinitely with the remainder having carryover periods of five to 20 years.

Accounting guidance for income taxes requires a deferred tax liability to be established for the U.S. tax impact of undistributed earnings of foreign subsidiaries unless it can be shown that these earnings will be permanently reinvested outside the U.S. As a result of the enactment of the 2017 Act in the fourth quarter of 2017, we recognized a one-time transition tax expense related to certain foreign earnings for which U.S. tax had been previously deferred, and remeasured our deferred tax liability related to future foreign earnings.

In accordance with the accounting guidance for income taxes, we estimate whether recoverability of our deferred tax assets is “more likely than not,” based on forecasts of taxable income in the related tax jurisdictions. In this estimate, we use historical results, projected future operating results based upon approved business plans, eligible carry forward periods, tax planning opportunities and other relevant considerations. This includes the consideration of tax law changes, prior profitability performance and the uncertainty of future projected profitability.

Under applicable GAAP, a sustained period of profitability in our operations is required before we would change our judgment regarding the need for a valuation allowance against our net deferred tax assets. During 2016, our business in China turned to a position of cumulative profitability on a pre-tax basis, considering our operating results for the current year and the previous two years. We have concluded that this record of cumulative profitability in recent years, in addition to our long range forecast showing continued profitability, has provided positive evidence that it is more likely than not that our net deferred tax assets in China will be realized. Accordingly, in 2016 we released our valuation allowance in China resulting in a \$5.4 million tax benefit in our 2016 provision for income taxes.

As of December 31, 2017 and December 31, 2016, we have a valuation allowance of \$180.4 million and \$164.8 million, respectively, related to net deferred tax assets in several foreign jurisdictions and U.S. state and local jurisdictions.

**UNRECOGNIZED INCOME TAX BENEFITS** To the extent our uncertain tax positions do not meet the “more likely than not” threshold, we have derecognized such positions. To the extent our uncertain tax positions meet the “more likely than not” threshold, we have measured and recorded the highest probable benefit, and have established appropriate reserves for benefits that exceed the amount likely to be sustained upon examination.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

A reconciliation of the beginning and ending amounts of unrecognized income tax benefits is as follows:

	Unrecognized Income Tax Benefits (in millions)	Interest and Penalties
Balance at January 1, 2015	\$47.3	\$ 12.2
Increase in prior year tax positions	—	1.4
Decrease in prior year tax positions	(9.4 )	(4.9 )
Increase in current year tax positions	8.8	—
Foreign currency remeasurement adjustment	(5.1 )	(1.8 )
Balance at December 31, 2015	\$41.6	\$ 6.9
Increase in prior year tax positions	0.4	2.0
Decrease in prior year tax positions	(2.5 )	(0.5 )
Increase in current year tax positions	9.3	—
Settlement	(17.3 )	(5.6 )
Foreign currency remeasurement adjustment	(3.3 )	(0.3 )
Balance at December 31, 2016	\$28.2	\$ 2.5
Increase in prior year tax positions	1.5	3.1
Decrease in prior year tax positions	(0.4 )	—
Increase in current year tax positions	10.5	—
Increase from acquisitions	8.3	1.9
Settlement	(1.2 )	(0.1 )
Foreign currency remeasurement adjustment	0.8	0.1
Balance at December 31, 2017	\$47.7	\$ 7.5

At December 31, 2017 and December 31, 2016, we had \$47.7 million and \$28.2 million of net unrecognized income tax benefits, respectively. The increase in net unrecognized income tax benefits at December 31, 2017, as compared to December 31, 2016, is primarily attributable to our acquisition of MPG and transfer pricing.

In January 2016, we completed negotiations with the Mexican tax authorities to settle 2007 through 2009 transfer pricing audits. We made a payment of \$22.9 million in January 2016 that fully satisfied our obligations for transfer pricing issues for tax years 2007 through 2013. Including these settlements, we made payments of approximately \$28 million in 2016 to the Mexican tax authorities related to transfer pricing matters.

In 2017, 2016, and 2015, we recognized expense of \$3.1 million, expense of \$1.5 million and a benefit of \$3.5 million, respectively, related to interest and penalties in income tax expense on our Consolidated Statement of Income. We have a liability of \$7.5 million and \$2.5 million related to the estimated future payment of interest and penalties at December 31, 2017 and 2016, respectively. The amount of the uncertain tax position as of December 31, 2017 that, if recognized, would affect the effective tax rate is \$55.2 million.

We file income tax returns in the U.S. federal jurisdiction, as well as various states and foreign jurisdictions. We are currently under a U.S. federal income tax examination for our legacy AAM business for the years 2014 and 2015, and are under a U.S. federal income tax examination for our legacy MPG business for 2015. We are also currently under examination by various state and local, as well as foreign tax authorities. U.S. federal income tax examinations for the years 2012 and 2013 were settled in January of 2017, resulting in no cash payment or reduction in our liability for unrecognized income tax benefits. We are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2012.

Based on the status of the IRS audits and audits outside the U.S., and the protocol of finalizing audits by the relevant tax authorities, it is not possible to estimate the impact of changes, if any, to previously recorded uncertain tax positions. Although it is difficult to estimate with certainty the amount of an audit settlement, we do not expect the settlement will be materially different from what we have recorded. We will continue to monitor the progress and conclusions of all ongoing audits and will adjust our estimated liability as necessary.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

11. EARNINGS PER SHARE (EPS)

We present EPS using the two-class method. This method allocates undistributed earnings between common shares and non-vested share based payment awards that entitle the holder to nonforfeitable dividend rights. Our participating securities include non-vested restricted stock units.

The following table sets forth the computation of our basic and diluted EPS available to shareholders of common stock (excluding participating securities):

	2017	2016	2015
	(in millions, except per share data)		
Numerator			
Net income attributable to AAM	\$337.1	\$240.7	\$235.6
Less: Net income allocated to participating securities	(7.5 )	(5.5 )	(5.3 )
Net income attributable to common shareholders - Basic and Dilutive	\$329.6	\$235.2	\$230.3
Denominators			
Basic common shares outstanding -			
Weighted-average shares outstanding	104.6	78.2	77.7
Less: Participating securities	(2.3 )	(1.8 )	(1.8 )
Weighted-average common shares outstanding	102.3	76.4	75.9
Effect of dilutive securities -			
Dilutive stock-based compensation	0.5	0.5	0.4
Diluted shares outstanding -			
Adjusted weighted-average shares after assumed conversions	102.8	76.9	76.3
Basic EPS	\$3.22	\$3.08	\$3.03
Diluted EPS	\$3.21	\$3.06	\$3.02

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

12. COMMITMENTS AND CONTINGENCIES

**PURCHASE COMMITMENTS** Obligated purchase commitments for capital expenditures and related project expenses were approximately \$356.4 million at December 31, 2017 and \$203.0 million at December 31, 2016.

**LEGAL PROCEEDINGS** We are involved in various legal proceedings incidental to our business. Although the outcome of these matters cannot be predicted with certainty, we do not believe that any of these matters, individually or in the aggregate, will have a material effect on our financial condition, results of operations or cash flows.

We are subject to various federal, state, local and foreign environmental and occupational safety and health laws, regulations and ordinances, including those regulating air emissions, water discharge, waste management and environmental cleanup. We will continue to closely monitor our environmental conditions to ensure that we are in compliance with all laws, regulations and ordinances. We have made, and anticipate continuing to make, capital and other expenditures to comply with environmental requirements, including recurring administrative costs. Such expenditures were not significant during 2017, 2016 and 2015.

On April 6, 2017, we completed our acquisition of MPG. A subsidiary of MPG, Grede Wisconsin Subsidiaries LLC (Grede Wisconsin), had been under investigation by the U.S. Department of Justice and the Environmental Protection Agency for alleged Clean Air Act violations and alleged obstruction of justice relating to the January 2012 removal of debris from the roof of a heat treat oven that was purported to contain asbestos at a now closed Grede facility in Berlin, Wisconsin. The United States Attorney, Eastern District of Wisconsin, indicted Grede LLC and Grede II LLC, the parent company of Grede Wisconsin. During the fourth quarter of 2017, we settled this matter for approximately \$0.5 million.

**ENVIRONMENTAL OBLIGATIONS** Due to the nature of our manufacturing operations, we have legal obligations to perform asset retirement activities pursuant to federal, state, and local requirements. The process of estimating environmental liabilities is complex. Significant uncertainty may exist related to the timing and method of the settlement of these obligations. Therefore, these liabilities are not reasonably estimable until a triggering event occurs that allows us to estimate a range and assess the probabilities of potential settlement dates and the potential methods of settlement.

In the future, we will update our estimated costs and potential settlement dates and methods and their associated probabilities based on available information. Any update may change our estimate and could result in a material adjustment to this liability.

**PRODUCT WARRANTIES** We record a liability for estimated warranty obligations at the dates our products are sold. These estimates are established using sales volumes and internal and external warranty data where there is no payment history and historical information about the average cost of warranty claims for customers with prior claims. We estimate our costs based on the contractual arrangements with our customers, existing customer warranty terms and internal and external warranty data, which includes a determination of our warranty claims and actions taken to improve product quality and minimize warranty claims. We continuously evaluate these estimates and our customers' administration of their warranty programs. We closely monitor actual warranty claim data and adjust the liability, as necessary, on a quarterly basis.

During 2017 and 2016, we also made adjustments to our warranty accrual to reflect revised estimates regarding our projected future warranty obligations. The following table provides a reconciliation of changes in the product warranty liability:

	December 31,	
	2017	2016



	(in millions)	
Beginning balance	\$42.9	\$36.6
Accruals	20.6	16.0
Settlements	(5.6 )	(7.3 )
Adjustments to prior period accruals	(9.2 )	(2.3 )
Foreign currency translation	0.8	(0.1 )
Ending balance	\$49.5	\$42.9

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

13. RECLASSIFICATIONS OUT OF ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Reclassification adjustments and other activity impacting accumulated other comprehensive income (loss) (AOCI) during the year ended December 31, 2017, December 31, 2016 and December 31, 2015 are as follows (in millions):

	Defined Benefit Plans	Foreign Currency Translation Adjustments	Unrecognized Loss on Cash Flow Hedges	Total
Balance at January 1, 2015	\$(240.6)	\$ (48.9 )	\$ (7.4 )	\$(296.9)
Other comprehensive income (loss) before reclassifications	21.2	(70.3 )	(16.9 )	(66.0 )
Income tax effect of other comprehensive income (loss) before reclassifications	(7.2 )	—	—	(7.2 )
Amounts reclassified from accumulated other comprehensive loss into net income	4.0	(a)—	10.9	(b)14.9
Income taxes reclassified into net income	(1.3 )	—	—	(1.3 )
Net current period other comprehensive income (loss)	16.7	(70.3 )	(6.0 )	(59.6 )
Balance at December 31, 2015	\$(223.9)	\$ (119.2 )	\$ (13.4 )	\$(356.5)
Other comprehensive loss before reclassifications	(27.5 )	(3.2 )	(20.8 )	(51.5 )
Income tax effect of other comprehensive loss before reclassifications	5.8	—	—	5.8
Amounts reclassified from accumulated other comprehensive loss into net income	3.2	(a)—	10.5	(b)13.7
Income taxes reclassified into net income	(1.1 )	—	—	(1.1 )
Net current period other comprehensive loss	(19.6 )	(3.2 )	(10.3 )	(33.1 )
Balance at December 31, 2016	\$(243.5)	\$ (122.4 )	\$ (23.7 )	\$(389.6)
Other comprehensive income (loss) before reclassifications	(20.1 )	88.3	12.0	80.2
Income tax effect of other comprehensive income (loss) before reclassifications	5.5	—	(0.2 )	5.3
Amounts reclassified from accumulated other comprehensive loss into net income	8.2	(a)—	5.3	(b)13.5
Income taxes reclassified into net income	(2.1 )	—	—	(2.1 )
Net current period other comprehensive income (loss)	(8.5 )	88.3	17.1	96.9
Balance at December 31, 2017	\$(252.0)	\$ (34.1 )	\$ (6.6 )	\$(292.7)

(a) The amount reclassified from AOCI included \$8.7 million in cost of goods sold (COGS) and \$(0.5) million in selling, general & administrative expenses (SG&A) for the year ended December 31, 2017, \$4.4 million in COGS and \$(1.2) million in SG&A for the year ended December 31, 2016 and \$4.8 million in COGS and \$(0.8) million in SG&A for the year ended December 31, 2015.

(b) The amounts reclassified from AOCI are included in COGS.

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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

14. SEGMENT AND GEOGRAPHIC INFORMATION

Prior to our acquisition of MPG on April 6, 2017, we operated in one reportable segment: the manufacture, engineer, design and validation of driveline systems and related components and chassis modules for light trucks, sport utility vehicles (SUVs), crossover vehicles, passenger cars and commercial vehicles. Subsequent to our acquisition of MPG, our business was organized into four business units, each representing a reportable segment under ASC 280 Segment Reporting. The four segments are Driveline, Metal Forming, Powertrain, and Casting. The results of each segment are regularly reviewed by the chief operating decision maker to assess the performance of the segment and make decisions regarding the allocation of resources to the segments.

Our product offerings by segment are as follows:

Driveline products consist primarily of axles, driveshafts, power transfer units, rear drive modules, transfer cases, and electric and hybrid driveline products and systems for light trucks, SUVs, crossover vehicles, passenger cars and commercial vehicles;

Metal Forming products consist primarily of axle and transmission shafts, ring and pinion gears, differential gears, transmission gears and shafts, and suspension components for Original Equipment Manufacturers and Tier 1 automotive suppliers;

The Powertrain segment products consist primarily of transmission module and differential assemblies, transmission valve bodies, connecting rod forging and assemblies, torsional vibration dampers, and variable valve timing products for Original Equipment Manufacturers and Tier I automotive suppliers; and

The Casting segment produces both thin wall castings and high strength ductile iron castings, as well as differential cases, steering knuckles, control arms, brackets, and turbo charger housings for the global light vehicle, commercial and industrial markets.

We use Segment Adjusted EBITDA as the measure of earnings to assess the performance of each segment and determine the resources to be allocated to the segments. Segment Adjusted EBITDA is defined as earnings before interest expense, income taxes, depreciation and amortization for our reportable segments, excluding the impact of restructuring and acquisition-related costs, debt refinancing and redemption costs and non-recurring items.

Year Ended December 31, 2017

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$4,040.8	\$1,242.6	\$816.5	\$676.4	\$ —	\$6,776.3
Less: Intersegment sales	1.1	412.6	9.9	86.7	—	510.3
Net external sales	\$4,039.7	\$830.0	\$806.6	\$589.7	\$ —	\$6,266.0
Segment adjusted EBITDA	\$692.3	\$232.3	\$131.1	\$47.0	\$ —	\$1,102.7
Depreciation and amortization	\$189.4	\$95.1	\$81.7	\$50.8	\$11.5	\$428.5
Capital Expenditures	\$296.9	\$65.2	\$84.7	\$30.9	\$ —	\$477.7

Total Assets	\$2,303.0	\$2,175.3	\$ 1,824.0	\$984.3	\$ 596.2	\$7,882.8
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AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

In accordance with the guidance in ASC 280, we must retrospectively report our segment results for fiscal years 2015 and 2016. During this time, we had no operations in what are now our Powertrain and Casting business units. The following tables represent information by reporting segment for our Driveline and Metal Forming business units as of December 31, 2016, and for the years ended December 31, 2016 and 2015:

## Year Ended December 31, 2016

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$3,735.6	\$ 552.2	\$ —	\$ —	\$ —	\$4,287.8
Less: Intersegment sales	4.9	334.9	—	—	—	339.8
Net external sales	\$3,730.7	\$ 217.3	\$ —	\$ —	\$ —	\$3,948.0
Segment adjusted EBITDA	\$515.8	\$ 103.6	\$ —	\$ —	\$ —	\$619.4
Depreciation and amortization	\$160.8	\$ 24.1	\$ —	\$ —	\$ 16.9	\$201.8
Capital Expenditures	\$159.0	\$ 22.9	\$ —	\$ —	\$ 41.1	\$223.0
Total Assets	\$2,183.9	\$ 410.3	\$ —	\$ —	\$ 828.1	\$3,422.3

## Year Ended December 31, 2015

	Driveline	Metal Forming	Powertrain	Casting	Corporate and Eliminations	Total
Sales	\$3,690.0	\$ 560.1	\$ —	\$ —	\$ —	\$4,250.1
Less: Intersegment sales	1.8	345.2	—	—	—	347.0
Net external sales	\$3,688.2	\$ 214.9	\$ —	\$ —	\$ —	\$3,903.1
Segment adjusted EBITDA	\$457.4	\$ 113.7	\$ —	\$ —	\$ —	\$571.1
Depreciation and amortization	\$159.1	\$ 23.7	\$ —	\$ —	\$ 15.6	\$198.4
Capital Expenditures	\$154.0	\$ 20.9	\$ —	\$ —	\$ 18.6	\$193.5

Assets included in the Corporate and Eliminations column of the tables above represent AAM corporate assets, as well as eliminations of intercompany assets.



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The following table represents a reconciliation of Segment adjusted EBITDA to consolidated income before income taxes for the years ended December 31, 2017, 2016 and 2015:

	Year Ended December 31,		
	2017	2016	2015
Segment adjusted EBITDA	\$1,102.7	\$619.4	\$571.1
Interest expense	(195.6 )	(93.4 )	(99.2 )
Depreciation and amortization	(428.5 )	(201.8 )	(198.4 )
Restructuring and acquisition-related costs	(110.7 )	(26.2 )	—
Pension settlement	(3.2 )	—	—
Acquisition-related fair value inventory adjustment	(24.9 )	—	—
Impact of change in accounting principle	3.7	—	—
Debt refinancing and redemption costs	(3.5 )	—	(0.8 )
Other	—	1.0	—
Income before income taxes	\$340.0	\$299.0	\$272.7

Financial information relating to our operations by geographic area is presented in the following table. Net sales are attributed to countries based upon location of customer. Long-lived assets exclude deferred income taxes.

	December 31,		
	2017	2016	2015
	(in millions)		
Net sales			
United States	\$3,319.4	\$2,147.9	\$2,121.9
Canada	310.1	94.7	119.3
Mexico	1,393.3	1,061.9	1,060.2
South America	161.8	124.6	106.6
China	297.3	203.4	185.5
All other Asia	291.9	208.8	185.2
Europe	480.6	102.8	120.6
Other	11.6	3.9	3.8
Total net sales	\$6,266.0	\$3,948.0	\$3,903.1

Long-lived assets			
United States	\$4,253.8	\$831.0	\$824.0
Mexico	993.8	529.2	522.6
South America	61.4	61.5	48.5
China	180.9	129.8	85.8
All other Asia	103.4	92.0	103.7
Europe	307.4	111.7	120.3
Total long-lived assets	\$5,900.7	\$1,755.2	\$1,704.9



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

## 15. UNAUDITED QUARTERLY FINANCIAL DATA

	Three Months Ended,			
	March 31	June 30	September 30	December 31
	(in millions, except per share data)			
2017				
Net sales	\$1,049.9	\$1,757.8	\$1,724.4	\$1,733.9
Gross profit	210.7	316.4	297.7	294.3
Net income	78.4	66.3	86.3	106.5
Net income attributable to AAM	78.4	66.2	86.2	106.3
Basic EPS <sup>(1)</sup>	\$1.00	\$0.59	\$0.76	\$0.93
Diluted EPS <sup>(1)</sup>	\$0.99	\$0.59	\$0.75	\$0.93
2016				
Net sales	\$969.2	\$1,025.4	\$1,006.9	\$946.5
Gross profit	174.0	191.4	181.2	179.5 <sup>(2)</sup>
Net income	61.1	71.0	61.7	46.9
Net income attributable to AAM	61.1	71.0	61.7	46.9
Basic EPS <sup>(1)</sup>	\$0.78	\$0.91	\$0.79	\$0.60
Diluted EPS <sup>(1)</sup>	\$0.78	\$0.90	\$0.78	\$0.59

(1) Full year basic and diluted EPS will not necessarily agree to the sum of the four quarters because each quarter is a separate calculation.

(2) In the third quarter of 2016, we identified an indicator of impairment at our Pantnagar Manufacturing Facility in India due to changes in forecasted cash flows and, as a result, recorded an impairment charge of \$3.4 million to write the assets down to fair value. This impairment charge was recorded to Cost of Goods Sold in the third quarter of 2016 but has been reclassified to Restructuring and Acquisition-Related Costs in the Consolidated Statement of Income for the full year 2016. This reclassification occurred in the fourth quarter of 2016 as a result of the announced closure of the facility.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

16. SUPPLEMENTAL GUARANTOR CONDENSED CONSOLIDATING FINANCIAL STATEMENTS

Holdings has no significant assets other than its 100% ownership in AAM, Inc. and Metaldyne Performance Group, Inc. (MPG Inc.), and no direct subsidiaries other than AAM, Inc. and MPG Inc. The 7.75% Notes, 6.625% Notes, 6.50% Notes, 6.25% Notes (due 2025) and 6.25% Notes (due 2021) are senior unsecured obligations of AAM Inc.; all of which are fully and unconditionally guaranteed, on a joint and several basis, by Holdings, MPG Inc., and substantially all domestic subsidiaries of AAM, Inc. and MPG Inc.

These Condensed Consolidating Financial Statements are prepared under the equity method of accounting whereby the investments in subsidiaries are recorded at cost and adjusted for the parent's share of the subsidiaries' cumulative results of operations, capital contributions and distributions, and other equity changes.

Condensed Consolidating Statements of Income

2017	Holdings	AAM Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
	(in millions)					
Net sales						
External	\$—	\$1,074.6	\$ 1,668.2	\$ 3,523.2	\$—	\$ 6,266.0
Intercompany	—	2.4	285.2	27.5	(315.1 )	—
Total net sales	—	1,077.0	1,953.4	3,550.7	(315.1 )	6,266.0
Cost of goods sold	—	996.6	1,730.9	2,734.5	(315.1 )	5,146.9
Gross profit	—	80.4	222.5	816.2	—	1,119.1
Selling, general and administrative expenses	—	223.2	63.9	103.0	—	390.1
Amortization of intangible assets	—	5.6	67.5	2.2	—	75.3
Restructuring and acquisition-related costs	—	105.2	1.9	3.6	—	110.7
Operating income (loss)	—	(253.6 )	89.2	707.4	—	543.0
Non-operating income (expense), net	—	(210.0 )	18.6	(11.6 )	—	(203.0 )
Income (loss) before income taxes	—	(463.6 )	107.8	695.8	—	340.0
Income tax expense (benefit)	—	194.1	(247.0 )	55.4	—	2.5
Earnings from equity in subsidiaries	337.1	289.5	76.1	—	(702.7 )	—
Net income (loss) before royalties	337.1	(368.2 )	430.9	640.4	(702.7 )	337.5
Royalties	—	317.3	3.6	(320.9 )	—	—
Net income (loss) after royalties	337.1	(50.9 )	434.5	319.5	(702.7 )	337.5
Net income attributable to noncontrolling interests	—	—	—	(0.4 )	—	(0.4 )
Net income (loss) attributable to AAM	\$337.1	\$(50.9 )	\$ 434.5	\$ 319.1	\$(702.7 )	\$ 337.1
Other comprehensive income, net of tax	96.9	40.1	87.3	102.6	(230.0 )	96.9
Comprehensive income (loss)	\$434.0	\$(10.8 )	\$ 521.8	\$ 421.7	\$(932.7 )	\$ 434.0

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

2016	Holdings	AAM Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
Net sales						
External	\$—	\$ 1,109.6	\$ 212.2	\$ 2,626.2	\$—	\$ 3,948.0
Intercompany	—	8.3	241.6	16.1	(266.0 )	—
Total net sales	—	1,117.9	453.8	2,642.3	(266.0 )	3,948.0
Cost of goods sold	—	1,063.8	375.4	2,048.7	(266.0 )	3,221.9
Gross profit	—	54.1	78.4	593.6	—	726.1
Selling, general and administrative expenses	—	243.6	—	70.6	—	314.2
Amortization of intangible assets	—	5.0	—	—	—	5.0
Restructuring and acquisition-related costs	—	21.1	—	5.1	—	26.2
Operating income (loss)	—	(215.6 )	78.4	517.9	—	380.7
Non-operating income (expense), net	—	(96.6 )	10.9	4.0	—	(81.7 )
Income (loss) before income taxes	—	(312.2 )	89.3	521.9	—	299.0
Income tax expense	—	27.4	4.2	26.7	—	58.3
Earnings (loss) from equity in subsidiaries	240.7	267.4	(16.7 )	—	(491.4 )	—
Net income (loss) before royalties	240.7	(72.2 )	68.4	495.2	(491.4 )	240.7
Royalties	—	312.9	—	(312.9 )	—	—
Net income after royalties	240.7	240.7	68.4	182.3	(491.4 )	240.7
Net income attributable to noncontrolling interests	—	—	—	—	—	—
Net income attributable to AAM	\$ 240.7	\$ 240.7	\$ 68.4	\$ 182.3	\$ (491.4)	\$ 240.7
Other comprehensive loss, net of tax	(33.1 )	(33.1 )	(1.2 )	(12.1 )	46.4	(33.1 )
Comprehensive income	\$ 207.6	\$ 207.6	\$ 67.2	\$ 170.2	\$ (445.0)	\$ 207.6
2015	Holdings	AAM Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
Net sales						
External	\$—	\$ 1,149.0	\$ 210.3	\$ 2,543.8	\$—	\$ 3,903.1
Intercompany	—	9.4	258.3	19.0	(286.7 )	—
Total net sales	—	1,158.4	468.6	2,562.8	(286.7 )	3,903.1
Cost of goods sold	—	1,114.5	385.2	2,054.7	(286.7 )	3,267.7
Gross profit	—	43.9	83.4	508.1	—	635.4
Selling, general and administrative expenses	—	207.4	0.1	66.6	—	274.1
Amortization of intangible assets	—	3.2	—	—	—	3.2
Operating income (loss)	—	(166.7 )	83.3	441.5	—	358.1
Non-operating income (expense), net	—	(99.3 )	10.1	3.8	—	(85.4 )
Income (loss) before income taxes	—	(266.0 )	93.4	445.3	—	272.7
Income tax expense	—	21.6	5.5	10.0	—	37.1
Earnings (loss) from equity in subsidiaries	235.6	262.3	(20.8 )	—	(477.1 )	—
Net income (loss) before royalties	235.6	(25.3 )	67.1	435.3	(477.1 )	235.6
Royalties	—	260.9	—	(260.9 )	—	—
Net income after royalties	235.6	235.6	67.1	174.4	(477.1 )	235.6
Net income attributable to noncontrolling interests	—	—	—	—	—	—
Net income attributable to AAM	\$ 235.6	\$ 235.6	\$ 67.1	\$ 174.4	\$ (477.1)	\$ 235.6
Other comprehensive loss, net of tax	(59.6 )	(59.6 )	(63.6 )	(68.4 )	191.6	(59.6 )
Comprehensive income	\$ 176.0	\$ 176.0	\$ 3.5	\$ 106.0	\$ (285.5)	\$ 176.0



AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

## Condensed Consolidating Balance Sheets

2017	Holdings	AAM Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
Assets						
Current assets						
Cash and cash equivalents	\$—	\$91.9	\$ 0.1	\$ 284.8	\$—	\$ 376.8
Accounts receivable, net	—	138.9	287.9	609.1	—	1,035.9
Intercompany receivables	—	3,475.2	479.9	7.5	(3,962.6 )	—
Inventories, net	—	37.2	147.4	207.4	—	392.0
Other current assets	—	40.4	9.9	90.0	—	140.3
Total current assets	—	3,783.6	925.2	1,198.8	(3,962.6 )	1,945.0
Property, plant and equipment, net	—	250.9	786.8	1,365.2	—	2,402.9
Goodwill	—	—	1,218.4	435.9	—	1,654.3
Intangible assets, net	—	21.0	1,155.6	35.9	—	1,212.5
Intercompany notes and accounts receivable	11.7	—	243.5	—	(255.2 )	—
Other assets and deferred charges	—	349.1	122.8	196.2	—	668.1
Investment in subsidiaries	2,841.3	1,955.2	1,280.1	—	(6,076.6 )	—
Total assets	\$2,853.0	\$6,359.8	\$ 5,732.4	\$ 3,232.0	\$(10,294.4)	\$ 7,882.8
Liabilities and stockholders' equity						
Current liabilities						
Current portion of long-term debt	\$—	\$—	\$ —	\$ 5.9	\$—	\$ 5.9
Accounts payable	—	139.0	204.6	455.4	—	799.0
Intercompany payables	1,313.0	563.7	2,017.7	68.2	(3,962.6 )	—
Other current liabilities	—	181.6	52.4	177.5	—	411.5
Total current liabilities	1,313.0	884.3	2,274.7	707.0	(3,962.6 )	1,216.4
Intercompany notes and accounts payable	—	11.7	—	243.5	(255.2 )	—
Long-term debt, net	—	3,894.6	4.4	70.3	—	3,969.3
Other long-term liabilities	—	639.1	333.2	184.8	—	1,157.1
Total liabilities	1,313.0	5,429.7	2,612.3	1,205.6	(4,217.8 )	6,342.8
Total AAM stockholders' equity	1,536.0	930.1	3,120.1	2,022.4	(6,072.6 )	1,536.0
Noncontrolling interests in subsidiaries	4.0	—	—	4.0	(4.0 )	4.0
Total stockholders' equity	1,540.0	930.1	3,120.1	2,026.4	(6,076.6 )	1,540.0
Total liabilities and stockholders' equity	\$2,853.0	\$6,359.8	\$ 5,732.4	\$ 3,232.0	\$(10,294.4)	\$ 7,882.8
2016	Holdings	AAM Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
Assets						
Current assets						
Cash and cash equivalents	\$—	\$84.3	\$ 1.6	\$ 395.3	\$—	\$ 481.2
Accounts receivable, net	—	126.7	21.9	411.4	—	560.0
Intercompany receivables	—	442.6	326.0	9.1	(777.7 )	—
Inventories, net	—	31.3	21.5	129.5	—	182.3
Other current assets	—	29.4	0.5	45.9	—	75.8
Total current assets	—	714.3	371.5	991.2	(777.7 )	1,299.3
Property, plant and equipment, net	—	213.7	102.9	777.1	—	1,093.7
Goodwill	—	—	147.8	6.2	—	154.0
Intangible assets, net	—	22.8	—	5.7	—	28.5

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Intercompany notes and accounts receivable	—	343.9	242.2	—	(586.1	) —
Other assets and deferred charges	—	644.9	39.8	162.1	—	846.8
Investment in subsidiaries	826.0	1,542.8	—	—	(2,368.8	) —
Total assets	\$826.0	\$3,482.4	\$ 904.2	\$ 1,942.3	\$(3,732.6	) \$ 3,422.3
Liabilities and stockholders' equity						
Current liabilities						
Current portion of long-term debt	\$—	\$—	\$ —	\$ 3.3	\$—	\$ 3.3
Accounts payable	—	80.6	35.8	265.9	—	382.3
Intercompany payables	—	324.8	153.4	299.5	(777.7	) —
Other current liabilities	—	142.2	4.3	119.4	—	265.9
Total current liabilities	—	547.6	193.5	688.1	(777.7	) 651.5
Intercompany notes and accounts payable	321.8	14.6	7.5	242.2	(586.1	) —
Long-term debt, net	—	1,339.7	4.1	57.1	—	1,400.9
Investment in subsidiaries obligation	—	—	124.7	—	(124.7	) —
Other long-term liabilities	—	754.5	0.6	110.6	—	865.7
Total liabilities	321.8	2,656.4	330.4	1,098.0	(1,488.5	) 2,918.1
Total stockholders' equity	504.2	826.0	573.8	844.3	(2,244.1	) 504.2
Total liabilities and stockholders' equity	\$826.0	\$3,482.4	\$ 904.2	\$ 1,942.3	\$(3,732.6	) \$ 3,422.3

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

## Condensed Consolidating Statements of Cash Flows

2017	AAM Holdings Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
	(in millions)				
Net cash provided by operating activities	\$—\$410.4	\$ 33.1	\$ 203.5	\$	—\$ 647.0
Investing activities					
Purchases of property, plant and equipment	— (69.1 )	(100.4 )	(308.2 )	—	(477.7 )
Proceeds from sale of property, plant and equipment	— 0.3	0.3	1.9	—	2.5
Purchase buyouts of leased equipment	— (13.3 )	—	—	—	(13.3 )
Proceeds from sale of business	— 7.5	(1.6 )	—	—	5.9
Acquisition of business, net of cash acquired	— (953.5 )	64.6	(6.6 )	—	(895.5 )
Net cash used in investing activities	— (1,028.1 )	(37.1 )	(312.9 )	—	(1,378.1 )
Financing activities					
Net debt activity	— 725.6	(0.7 )	(12.2 )	—	712.7
Debt issuance costs	— (91.0 )	—	—	—	(91.0 )
Employee stock option exercises	— 0.9	—	—	—	0.9
Purchase of treasury stock	(7)0—	—	—	—	(7.0 )
Intercompany activity	7.0 (10.2 )	3.2	—	—	—
Net cash provided by (used in) financing activities	— 625.3	2.5	(12.2 )	—	615.6
Effect of exchange rate changes on cash	— —	—	11.1	—	11.1
Net increase in cash and cash equivalents	— 7.6	(1.5 )	(110.5 )	—	(104.4 )
Cash and cash equivalents at beginning of period	— 84.3	1.6	395.3	—	481.2
Cash and cash equivalents at end of period	\$—\$91.9	\$ 0.1	\$ 284.8	\$	—\$ 376.8
2016	AAM Holdings Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
Net cash provided by operating activities	\$—\$78.3	\$ 25.3	\$ 304.0	\$	—\$ 407.6
Investing activities					
Purchases of property, plant and equipment	— (36.8 )	(18.0 )	(168.2 )	—	(223.0 )
Proceeds from sale of property, plant and equipment	— —	0.3	1.4	—	1.7
Purchase buyouts of leased equipment	— (4.6 )	—	—	—	(4.6 )
Proceeds from government grants	— —	—	2.8	—	2.8
Final distribution of Reserve Yield Plus Fund	— 1.0	—	—	—	1.0
Acquisition of business, net of cash acquired	— —	(5.6 )	—	—	(5.6 )
Net cash used in investing activities	— (40.4 )	(23.3 )	(164.0 )	—	(227.7 )
Financing activities					
Net debt activity	— (0.7 )	(0.4 )	24.4	—	23.3
Employee stock option exercises	— 0.3	—	—	—	0.3
Purchase of treasury stock	(5)2—	—	—	—	(5.2 )
Intercompany activity	5.2 (5.2 )	—	—	—	—
Net cash provided by (used in) financing activities	— (5.6 )	(0.4 )	24.4	—	18.4
Effect of exchange rate changes on cash	— —	—	0.4	—	0.4
Net increase (decrease) in cash and cash equivalents	— 32.3	1.6	164.8	—	198.7
Cash and cash equivalents at beginning of period	— 52.0	—	230.5	—	282.5
Cash and cash equivalents at end of period	\$—\$84.3	\$ 1.6	\$ 395.3	\$	—\$ 481.2





AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

2015	Holdings	AAM Inc.	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Elims	Consolidated
Net cash provided by operating activities	\$ —	\$ 163.7	\$ 68.1	\$ 145.8	\$ —	\$ 377.6
Investing activities						
Purchases of property, plant and equipment	—	(36.4 )	(12.8 )	(144.3 )	—	(193.5 )
Proceeds from sale of property, plant and equipment	—	0.1	0.1	0.1	—	0.3
Proceeds from government grants	—	—	—	5.1	—	5.1
Intercompany activity	—	—	(55.0 )	—	55.0	—
Net cash used in investing activities	—	(36.3 )	(67.7 )	(139.1 )	55.0	(188.1 )
Financing activities						
Net debt activity	—	(142.8 )	(0.4 )	3.0	—	(140.2 )
Employee stock option exercises	—	0.8	—	—	—	0.8
Purchase of treasury stock	(3.1 )	—	—	—	—	(3.1 )
Purchase of noncontrolling interest	—	—	—	(1.1 )	—	(1.1 )
Intercompany activity	3.1	(3.1 )	—	55.0	(55.0)	—
Net cash provided by (used in) financing activities	—	(145.1 )	(0.4 )	56.9	(55.0)	(143.6 )
Effect of exchange rate changes on cash	—	—	—	(12.6 )	—	(12.6 )
Net increase in cash and cash equivalents	—	(17.7 )	—	51.0	—	33.3
Cash and cash equivalents at beginning of period	—	69.7	—	179.5	—	249.2
Cash and cash equivalents at end of period	\$ —	\$ 52.0	\$ —	\$ 230.5	\$ —	\$ 282.5

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of American Axle & Manufacturing Holdings, Inc.

### Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of American Axle & Manufacturing Holdings, Inc. and subsidiaries (the "Company") as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, cash flows, and stockholders' equity, for each of the three years in the period ended December 31, 2017, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

### Basis for Opinions

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

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

### Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (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

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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/ Deloitte & Touche LLP

Detroit, Michigan

February 16, 2018

We have served as the Company's auditor since 1998.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

Under the direction of our Chief Executive Officer and Chief Financial Officer, we evaluated our disclosure controls and procedures and internal control over financial reporting and concluded that our disclosure controls and procedures (as defined in Rules 13a - 15(e) or 15d - 15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) were effective as of December 31, 2017.

Management Report on Internal Control over Financial Reporting

We are responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control system was designed to provide reasonable assurance to our management and Board of Directors regarding the preparation and fair presentation of our consolidated financial statements.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, we used criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our assessment, management concluded that, as of December 31, 2017, our internal control over financial reporting was effective based on those criteria.

The attestation report of our independent registered public accounting firm regarding internal control over financial reporting is included in Item 8, "Financial Statements and Supplementary Data."

Change in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the fourth quarter ended December 31, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by Item 401(b), (d) (e) and (f) of Regulation S-K about our executive officers is furnished in Part I of this Form 10-K, Annual Report under the caption “Executive Officers of the Registrant.” All other information required by Item 10 is incorporated herein by reference from our Proxy Statement which we expect to file on or about March 22, 2018.

We have adopted a code of ethics that applies to our Chief Executive Officer and Chief Financial Officer and the senior financial executives who report directly to our Chief Financial Officer. This code of ethics is available on our website at [www.aam.com](http://www.aam.com). We will post on our website any amendment to or waiver from the provisions of the code of ethics or our code of business conduct that applies to executive officers or directors of the Company.

Item 11. Executive Compensation

The information required by Item 11 is incorporated by reference from our Proxy Statement.

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

The information required by Item 12 is incorporated by reference from our Proxy Statement.

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

The information required by Item 13 under Items 404 and 407(a) of Regulation S-K is incorporated by reference from our Proxy Statement.

Item 14. Principal Accounting Fees and Services

The information required by Item 8(e) of Schedule 14A is incorporated by reference from our Proxy Statement.

Part IV

Item 15. Exhibits and Financial Statement Schedules

The following documents are filed as a part of this report:

1. All Financial Statements

Consolidated Statements of Income  
Consolidated Statements of Comprehensive Income  
Consolidated Balance Sheets  
Consolidated Statements of Cash Flows  
Consolidated Statement of Stockholders' Equity  
Notes to Consolidated Financial Statements  
Report of Independent Registered Public Accounting Firm

2. Financial Statement Schedules

Schedule II - Valuation and Qualifying Accounts for the years ended December 31, 2017, 2016 and 2015 is filed as part of this Form 10-K.

All other schedules have been omitted because they are not applicable or not required.

3. Exhibits

The following exhibits were previously filed unless otherwise indicated:

Number Description of Exhibit

- 2.1 Agreement and Plan of Merger by and among American Axle & Manufacturing Holdings, Inc., ALPHA SPV I, Inc. and Metaldyne Performance Group Inc.  
(Incorporated by reference to Exhibit 2.1 of Current Report on Form 8-K dated November 8, 2016.)
- 3.01 Amended and Restated Certificate of Incorporation  
(Incorporated by reference to Exhibit 3.01 filed with American Axle & Manufacturing Holdings, Inc. Registration Statement on Form S-1 (Registration No. 333-53491).)
- 3.02 Amended and Restated Bylaws of American Axle & Manufacturing Holdings, Inc.  
(Incorporated by reference to Exhibit 3.02 filed with American Axle & Manufacturing Holdings, Inc. Form 10-K for the year ended December 31, 2009.)
- 3.03 Second Amended and Restated Bylaws of American Axle & Manufacturing Holdings, Inc.  
(Incorporated by reference to Exhibit 3.03 of Current Report on Form 8-K dated August 3, 2016.)
- 3.04 Amended and Restated Certificate of Incorporation of American Axle & Manufacturing Holdings, Inc.  
(Incorporated by reference to Exhibit 3.2 filed with American Axle & Manufacturing Holdings, Inc. Registration Statement on Form S-8 (Registration No. 333-220300).)
- 3.05 Third Amended and Restated Bylaws of American Axle & Manufacturing Holdings, Inc.  
(Incorporated by reference to Exhibit 3.04 filed of Current Report on Form 8-K dated February 13, 2018.)

4.01 Specimen Certificate for shares of the Company's Common Stock  
(Incorporated by reference to Exhibit 4.01 filed with American Axle & Manufacturing Holdings, Inc.  
Registration Statement on Form S-1 (Registration No. 333-53491).)

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Number	Description of Exhibit
4.02	<u>Form of Indenture, among American Axle &amp; Manufacturing, Inc., American Axle &amp; Manufacturing Holdings, Inc., as guarantor, certain subsidiary guarantors and U.S. Bank National Association, as trustee (Incorporated by reference to Exhibit 4.3 of Registration Statement on Form S-3 dated July 12, 2011.)</u>
4.03	<u>Indenture, dated as of November 3, 2011, among American Axle &amp; Manufacturing, Inc., the Guarantors and U.S. Bank National Association, as trustee (Incorporated by Reference to Exhibit 4.1 of Current Report on Form 8-K dated October 31, 2011.)</u>
4.04	<u>Form of 7.75% Senior Notes due 2019 (Incorporated by Reference to Exhibit 4.2 of Current Report on Form 8-K dated October 31, 2011.)</u>
4.05	<u>Form of 6.625% Notes due 2022 (Incorporated by Reference to Exhibit 4.1 of Current Report on Form 8-K dated September 17, 2012.)</u>
4.06	<u>Form of 6.25% Notes due 2021 (Incorporated by Reference to Exhibit 4.1 of Current Report on Form 8-K dated February 28, 2013.)</u>
4.07	<u>Form of 5.125% Notes due 2019 (Incorporated by Reference to Exhibit 4.1 of Current Report on Form 8-K dated November 12, 2013.)</u>
4.08	<u>Form of 6.25% Notes due 2025 (Incorporated by Reference to Exhibit 4.2 of Current Report on Form 8-K dated March 23, 2017.)</u>
4.09	<u>Form of 6.50% Notes due 2027 (Incorporated by Reference to Exhibit 4.3 of Current Report on Form 8-K dated March 23, 2017.)</u>
4.10	<u>First Supplemental Indenture, dated March 23, 2017 among American Axle &amp; Manufacturing, Inc., Alpha SPV I, Inc., American Axle &amp; Manufacturing Holdings, Inc., certain subsidiary guarantors and U.S. Bank National Association, as trustee (Incorporated by reference to Exhibit 4.1 of Current Report on Form 8-K dated March 23, 2017.)</u>
4.11	<u>Second Supplemental Indenture, dated May 17, 2017 among American Axle &amp; Manufacturing, Inc., Metaldyne Performance Group Inc., American Axle &amp; Manufacturing Holdings, Inc. certain subsidiary guarantors and U.S. Bank National Association, as trustee (Incorporated by reference to Exhibit 4.1 of Current Report on Form 8-K dated May 17, 2017.)</u>
4.12	<u>Registration Rights Agreement, dated as of March 23, 2017, among American Axle &amp; Manufacturing, Inc., certain subsidiary guarantors and J.P. Morgan Securities LLC, as representative of the Initial Purchasers, in respect of the 6.25% Senior Notes due 2025 (Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated March 23, 2017.)</u>



Number	Description of Exhibit
4.13	<u>Registration Rights Agreement, dated as of March 23, 2017, among American Axle &amp; Manufacturing, Inc., certain subsidiary guarantors and J.P. Morgan Securities LLC, as representative of the Initial Purchasers, in respect of the 6.50% Senior Notes due 2027</u> <u>(Incorporated by reference to Exhibit 10.2 of Current Report on Form 8-K dated March 23, 2017.)</u>
10.01	<u>Asset Purchase Agreement, dated February 18, 1994, between AAM, Inc. and GM, and all amendments thereto</u>  <u>(Incorporated by reference to Exhibit 10.01 filed with American Axle &amp; Manufacturing Holdings, Inc. Registration Statement on Form S-1 (Registration No. 333-53491).)</u>
10.02	<u>Lifetime Program Contract for GMT-900 Products, between GM and AAM, Inc.</u> <u>(Incorporated by reference to Exhibit 10.51 filed with American Axle &amp; Manufacturing Holdings, Inc. Form 10-Q for the quarterly period ended June 30, 2003.)</u>
++10.03	<u>Letter Agreement dated April 22, 2004 by and between DaimlerChrysler Corporation and AAM, Inc.</u> <u>(Incorporated by reference to Exhibit 10.43 filed with American Axle &amp; Manufacturing Holdings, Inc. Form 10-Q for the quarterly period ended June 30, 2004.)</u>
‡10.04	<u>Forms of Restricted Stock and Restricted Stock Unit Agreements under 1999 Stock Incentive Plan</u>  <u>(Incorporated by reference to Exhibit 10.45 filed with American Axle &amp; Manufacturing Holdings, Inc. Form 10-Q for the quarterly period ended September 30, 2004.)</u>
‡10.05	<u>Form of Nonqualified Stock Option Agreement</u> <u>(Incorporated by reference to Exhibit 10.5 of Current Report on Form 8-K dated October 26, 2005.)</u>
‡10.06	<u>Restated 1999 American Axle &amp; Manufacturing Holdings, Inc. Stock Incentive Compensation Plan</u>  <u>(Incorporated by reference to Exhibit 10.51 filed with American Axle &amp; Manufacturing Holdings, Inc. Form 10-K for the year ended December 31, 2005.)</u>
++10.07	<u>Letter Agreement between General Motors Corporation and American Axle &amp; Manufacturing, Inc. dated June 29, 2007</u> <u>(Incorporated by reference to Exhibit 99.1 of Current Report on Form 8-K dated June 29, 2007.)</u>
‡10.08	<u>Form of 2008 Stock Option Award Agreement for executive officers of American Axle &amp; Manufacturing Holdings, Inc.</u> <u>(Incorporated by reference to Exhibit 10.52 filed with American Axle &amp; Manufacturing Holdings, Inc. Form 10-K for the year ended December 31, 2007.)</u>
10.09	<u>Agreement between General Motors Corporation and American Axle &amp; Manufacturing, Inc. dated May 3, 2008, as amended May 16, 2008</u> <u>(Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated May 23, 2008.)</u>
‡10.10	<u>Amended and Restated AAM 2009 Long-Term Incentive Plan</u> <u>(Incorporated by reference to Exhibit 10.61 filed with American Axle &amp; Manufacturing Holdings, Inc. Form 10-Q for the quarter ended June 30, 2009.)</u>



Number	Description of Exhibit
++10.11	<u>Settlement and Commercial Agreement, dated as of September 16, 2009, among General Motors Company, American Axle &amp; Manufacturing Holdings, Inc. and American Axle &amp; Manufacturing, Inc. (Incorporated by reference to Exhibit 10.62 of Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2009.)</u>
‡10.12	<u>Form of Nonqualified Stock Option Award Agreement under the 2012 Omnibus Incentive Plan (Incorporated by reference to Exhibit 10.2 of Current Report on Form 8-K dated May 1, 2012.)</u>
‡10.13	<u>Form of Restricted Stock Unit Award Agreement for Non-employee Directors under the 2012 Omnibus Incentive Plan (Incorporated by reference to Exhibit 10.3 of Current Report on Form 8-K dated May 1, 2012.)</u>
‡10.14	<u>Form of Restricted Stock Unit Award Agreement (Cliff Vesting) for Executive Officers under the 2012 Omnibus Incentive Plan (Incorporated by reference to Exhibit 10.4 of Current Report on Form 8-K dated May 1, 2012.)</u>
‡10.15	<u>Form of Restricted Stock Unit Award Agreement (Installment Vesting) for Executive Officers under the 2012 Omnibus Incentive Plan (Incorporated by reference to Exhibit 10.5 of Current Report on Form 8-K dated May 1, 2012.)</u>
‡10.16	<u>Form of Performance Unit Award Agreement for Executive Officers under the 2012 Omnibus Incentive Plan (Incorporated by reference to Exhibit 10.6 of Current Report on Form 8-K dated May 1, 2012.)</u>
‡10.17	<u>American Axle &amp; Manufacturing, Inc. Amended and Restated Supplemental Executive Retirement Program Document (Incorporated by reference to Exhibit 10.37 of Quarterly Report on Form 10-Q dated July 27, 2012.)</u>
10.18	<u>Amendment and Restatement Agreement dated as of September 13, 2013, among American Axle &amp; Manufacturing Holdings, Inc., JPMorgan Chase Bank, N.A., as Administrative Agent and as Collateral Agent, and each financial institution party thereto as a lender, including as Exhibit A thereto, the Amended and Restated Credit Agreement dated as of January 9, 2004 and amended and restated as of September 13, 2013 among American Axle &amp; Manufacturing, Inc., American Axle &amp; Manufacturing Holdings, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent (Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated September 16, 2013.)</u>
10.19	<u>Guarantee Agreement dated as of January 9, 2004, as amended and restated as of September 13, 2013, among American Axle &amp; Manufacturing, Inc., American Axle &amp; Manufacturing Holdings, Inc., certain subsidiaries of American Axle &amp; Manufacturing, Inc. identified therein, and JPMorgan Chase Bank, N.A. as Administrative Agent for the lenders referred to therein (Incorporated by reference to Exhibit 10.2 of Current Report on Form 8-K dated September 16, 2013.)</u>
10.20	<u>Collateral Agreement dated as of November 7, 2008, as amended and restated as of September 13, 2013, among American Axle &amp; Manufacturing Holdings, Inc., American Axle &amp; Manufacturing, Inc., certain subsidiaries of American Axle &amp; Manufacturing, Inc. identified therein and JPMorgan Chase Bank, N.A., as Collateral Agent (Incorporated by reference to Exhibit 99.1 of Current Report on Form 8-K dated September 16, 2013.)</u>

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Number	Description of Exhibit
‡10.21	<u>Form of Performance Share Award Agreement (Relative TSR) for Executive Officers under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.35 of Annual Report on Form 10-K dated February 7, 2014.)
‡10.22	<u>Form of Performance Share Award Agreement (EBITDA) for Executive Officers under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.36 of Annual Report on Form 10-K dated February 7, 2014.)
‡10.23	<u>Form of Restricted Stock Unit Award Agreement (Cliff Vesting) for Executive Officers under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.37 of Annual Report on Form 10-K dated February 7, 2014.)
‡10.24	<u>Form of Restricted Stock Unit Award Agreement for Board of Directors under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.1 of Quarterly Report on Form 10-Q dated May 2, 2014.)
‡10.25	<u>Amended and Restated Employment Agreement dated February 19, 2015 by and between the Company and David C. Dauch</u> (Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated February 26, 2015.)
‡10.26	<u>AAM Executive Officer Change in Control Plan dated February 19, 2015</u> (Incorporated by reference to Exhibit 10.2 of Current Report on Form 8-K dated February 26, 2015.)
‡10.27	<u>Form of Performance Share Award Agreement (Relative TSR) for Executive Officers under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.3 of Current Report on Form 8-K dated February 26, 2015.)
‡10.28	<u>Form of Performance Share Award Agreement (EBITDA) for Executive Officers under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.4 of Current Report on Form 8-K dated February 26, 2015.)
‡10.29	<u>Form of Restricted Stock Unit Award Agreement for Executive Officers under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.5 of Current Report on Form 8-K dated February 26, 2015.)
‡10.30	<u>Form of Restricted Stock Unit Award Agreement for Non-Employee Directors under the 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 10.6 of Current Report on Form 8-K dated February 26, 2015.)
‡10.31	<u>Amended and Restated American Axle &amp; Manufacturing Holdings, Inc. 2012 Omnibus Incentive Plan</u> (Incorporated by reference to Exhibit 4.1 filed with American Axle & Manufacturing Holdings, Inc. Registration Statement on Form S-8 (Registration No. 333-220300).)





Number	Description of Exhibit
‡10.32	<u>Employment Agreement dated as of August 1, 2015 by and between the Company and Michael K. Simonte (Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated July 31, 2015.)</u>
‡10.33	<u>Second Amended and Restated American Axle &amp; Manufacturing, Inc. Incentive Compensation Plan for Executive Officers effective as of January 1, 2016 (Incorporated by reference to Exhibit 10.38 of Annual Report on Form 10-K dated February 12, 2016.)</u>
‡10.34	<u>Voting Agreement (Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated November 8, 2016.)</u>
10.35	<u>Credit Agreement dated as of April 6, 2017 among American Axle &amp; Manufacturing Holdings, Inc., American Axle &amp; Manufacturing, Inc., each financial institution party thereto as a lender and JPMorgan Chase Bank, N.A., as Administrative Agent (Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated April 12, 2017.)</u>
10.36	<u>Collateral Agreement dated as of April 6, 2017 among American Axle &amp; Manufacturing Holdings, Inc., American Axle &amp; Manufacturing, Inc., certain subsidiaries of American Axle &amp; Manufacturing Holdings, Inc. identified therein and JPMorgan Chase Bank, N.A., as Collateral Agent (Incorporated by reference to Exhibit 10.2 of Current Report on Form 8-K dated April 12, 2017.)</u>
10.37	<u>Guarantee Agreement dated as of April 6, 2017 among American Axle &amp; Manufacturing Holdings, Inc., American Axle &amp; Manufacturing, Inc., certain subsidiaries identified therein and JPMorgan Chase Bank, N.A., as Administrative Agent (Incorporated by reference to Exhibit 99.1 of Current Report on Form 8-K dated April 12, 2017.)</u>
10.38	<u>Stockholders' Agreement, dated as of April 6, 2017, among American Axle &amp; Manufacturing Holdings, Inc., ASP MD Investco L.P. and American Securities LLC (Incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K dated April 6, 2017.)</u>
‡*10.39	<u>Amended and Restated American Axle &amp; Manufacturing Holdings, Inc. 2012 Omnibus Incentive Plan - 2018 Incentive Compensation Program for Executive Officers</u>
*12	<u>Computation of Ratio of Earnings to Fixed Charges</u>
18	<u>Letter from Deloitte &amp; Touche LLP Regarding Change in Accounting Principle (Incorporated by reference to Exhibit 18 of Quarterly Report on Form 10-Q dated July 28, 2017.)</u>
*21	<u>Subsidiaries of the Registrant</u>
*23	<u>Consent of Independent Registered Public Accounting Firm</u>
*31.1	<u>Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act</u>
*31.2	<u>Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act</u>
*32	<u>Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>



Number	Description of Exhibit
**101.INS	XBRL Instance Document
**101.SCH	XBRL Taxonomy Extension Schema Document
**101.PRE	XBRL Extension Presentation Linkbase Document
**101.LAB	XBRL Taxonomy Extension Label Linkbase Document
**101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
**101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

(All other exhibits are not applicable.)

++ Confidential Treatment Request Granted by the SEC

‡ Reflects Management or Compensatory Contract

\* Shown only in the original filed with the Securities and Exchange Commission

\*\* Submitted electronically with the original filed with the Securities and Exchange Commission

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## Schedule II - VALUATION AND QUALIFYING ACCOUNTS

	Additions					
	Balance	Charged	Acquisitions	Deductions		Balance
	at	to		-		At End
	Beginning	Beginning	and	See Notes		of
	of	Costs and	Other (a)	Below		Period
	Period	Expenses				Period
	(in millions)					
Year Ended December 31, 2015:						
Allowance for doubtful accounts	\$4.6	\$ 2.5	\$ —	\$ 2.8	(1)	\$ 4.3
Allowance for deferred taxes	156.9	31.9	—	21.5	(3)	167.3
Inventory valuation allowance	27.9	11.1	(12.2 )	9.7	(2)	17.1
Year Ended December 31, 2016:						
Allowance for doubtful accounts	4.3	0.4	—	1.6	(1)	3.1
Allowance for deferred taxes	167.3	18.4	—	20.9	(4)	164.8
Inventory valuation allowance	17.1	7.5	—	9.8	(2)	14.8
Year Ended December 31, 2017:						
Allowance for doubtful accounts	3.1	4.6	2.1	2.8	(1)	7.0
Allowance for deferred taxes	164.8	26.6	13.7	24.7	(5)	180.4
Inventory valuation allowance	14.8	39.1	9.2	45.8	(2)	17.3

(a) Amounts represent reserves recognized in conjunction with our acquisitions in 2017, as well as the impact of eliminating our reserves on indirect inventory as a result of our change in accounting principle during the second quarter of 2017, which was retrospectively adjusted in the earliest period presented. See Note 1 - Organization and Summary of Significant Accounting Policies for further information on the change in accounting principle.

(1) Uncollectible accounts charged off net of recoveries.

(2) Primarily relates to inventory adjustments for physical quantity discrepancies and write-offs of excess and obsolete inventories.

(3) Primarily reflects a reduction in deferred tax assets at various foreign locations due to foreign currency translation.

(4) Primarily reflects a reduction in deferred tax assets at various foreign locations due to foreign currency translation, as well as the reversal of the valuation allowance of \$5.4 million against our deferred tax assets in China.

Reflects an increase related to valuation allowances of MPG that existed as of the acquisition date and the impact (5) of tax reform resulting from the 2017 Act. This was partially offset by the reversal of certain state valuation allowances as a result of re-evaluating our state valuation allowances subsequent to the acquisition of MPG.

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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.

AMERICAN AXLE & MANUFACTURING HOLDINGS, INC.  
(Registrant)

/s/ Christopher J. May  
Christopher J. May  
Vice President & Chief Financial Officer  
(Chief Accounting Officer)

Date: February 16, 2018

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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 on the dates indicated.

Signature	Title	Date
/s/ David C. Dauch David C. Dauch	Chairman of the Board & Chief Executive Officer	February 16, 2018
/s/ Christopher J. May Christopher J. May	Vice President & Chief Financial Officer	February 16, 2018
/s/ Elizabeth A. Chappell Elizabeth A. Chappell	Director	February 16, 2018
/s/ William L. Kozyra William L. Kozyra	Director	February 16, 2018
/s/ Peter D. Lyons Peter D. Lyons	Director	February 16, 2018
/s/ James A. McCaslin James A. McCaslin	Director	February 16, 2018
/s/ William P. Miller II William P. Miller II	Director	February 16, 2018
/s/ John F. Smith John F. Smith	Director	February 16, 2018
/s/ George Thanopoulos George Thanopoulos	Director	February 16, 2018
/s/ Samuel Valenti III Samuel Valenti III	Director	February 16, 2018