DANA INC
Form 10-K
February 10, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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, 2016
Commission File Number: 1-1063

Dana Incorporated
(Exact name of registrant as specified in its charter)

Delaware	26-1531856
(State of incorporation)	(IRS Employer Identification Number)
3939 Technology Drive, Maumee, OH	43537
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (419) 887-3000

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

Title of each class	Name of each exchange on which registered
Common Stock, par value $0.01 per share	New York Stock Exchange

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

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

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

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 þ No o

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) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ No o

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

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

Large accelerated filer þ Accelerated filer o Non-accelerated filer o Smaller reporting company o

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

The aggregate market value of the common stock held by non-affiliates of the registrant computed by reference to the closing price of the common stock on June 30, 2016 was $1,512,538,357.

APPLICABLE ONLY TO CORPORATE ISSUERS:

There were 144,016,355 shares of the registrant's common stock outstanding at January 31, 2017.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held on April 27, 2017 are incorporated by reference into Part III.

DANA INCORPORATED
FORM 10-K
YEAR ENDED DECEMBER 31, 2016

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Forward-Looking Information

Statements in this report (or otherwise made by us or on our behalf) that are not entirely historical constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements can often be identified by words such as "anticipates," "expects," "believes," "intends," "plans," "predicts," "seeks," "estimates," "projects," "outlook," "may," "will," "should," "would," "could," "potential," "continue," "on expressions, variations or negatives of these words. These statements represent the present expectations of Dana Incorporated and its consolidated subsidiaries (Dana) based on our current information and assumptions. Forward-looking statements are inherently subject to risks and uncertainties. Our plans, actions and actual results could differ materially from our present expectations due to a number of factors, including those discussed below and elsewhere in this report and in our other filings with the Securities and Exchange Commission (SEC). All forward-looking statements speak only as of the date made and we undertake no obligation to publicly update or revise any forward-looking statement to reflect events or circumstances that may arise after the date of this report.

PART I

(Dollars in millions, except per share amounts)

Item 1. Business

General

Dana Incorporated (Dana) is headquartered in Maumee, Ohio and was incorporated in Delaware in 2007. As a global provider of high technology driveline (axles, driveshafts and transmissions), sealing and thermal-management products our customer base includes virtually every major vehicle manufacturer in the global light vehicle, medium/heavy vehicle and off-highway markets. As of December 31, 2016 we employed approximately 24,900 people, operated in 25 countries and had 91 major facilities around the world.

The terms “Dana,” “we,” “our” and “us,” when used in this report are references to Dana. These references include the subsidiaries of Dana unless otherwise indicated or the context requires otherwise.

Overview of our Business

We have aligned our organization around four operating segments: Light Vehicle Driveline Technologies (Light Vehicle), Commercial Vehicle Driveline Technologies (Commercial Vehicle), Off-Highway Driveline Technologies (Off-Highway) and Power Technologies. These operating segments have global responsibility and accountability for business commercial activities and financial performance.

External sales by operating segment for the years ended December 31, 2016, 2015 and 2014 are as follows:

	2016		2015		2014	
	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total
Light Vehicle	$2,607	44.8%	$2,482	40.9%	$2,496	37.7%
Commercial Vehicle	1,254	21.5%	1,533	25.3%	1,838	27.8%
Off-Highway	909	15.6%	1,040	17.2%	1,231	18.6%
Power Technologies	1,056	18.1%	1,005	16.6%	1,052	15.9%
Total	$5,826		$6,060		$6,617	

Refer to Segment Results of Operations in Item 7 and Note 19 to our consolidated financial statements in Item 8 for further financial information about our operating segments.

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Our business is diversified across end-markets, products and customers. The following table summarizes the markets, products and largest customers of each of our operating segments as of December 31, 2016.

Segment	Markets	Products	Largest Customers
Light Vehicle	Light vehicle market:	Front axles	Ford Motor Company
	Light trucks (full frame)	Rear axles	Fiat Chrysler Automobiles*
	Sport utility vehicles	Driveshafts/Propshafts	Renault-Nissan Alliance
	Crossover utility vehicles	Differentials	Toyota Motor Company
	Vans	Torque couplings	General Motors Company
	Passenger cars	Modular assemblies	Tata Motors
Commercial Vehicle	Medium/heavy vehicle market:	Steer axles	PACCAR Inc
	Medium duty trucks	Drive axles	Ford Motor Company
	Heavy duty trucks	Driveshafts	AB Volvo
	Buses	Tire inflation systems	Daimler AG
	Specialty vehicles		Navistar International Corporation
Off-Highway	Off-Highway market:	Front axles	Deere & Company
	Construction	Rear axles	AGCO Corporation
	Earth moving	Driveshafts	Manitou Group
	Agricultural	Transmissions	Oshkosh Corporation
	Mining	Torque converters	Sandvik AB
	Forestry	Tire inflation systems	
	Rail	Electronic controls	
	Material handling		
Power Technologies	Light vehicle market	Gaskets	Ford Motor Company
	Medium/heavy vehicle market	Cover modules	General Motors Company
	Off-Highway market	Heat shields	Renault-Nissan Alliance
		Engine sealing systems	Mahle GmbH
		Cooling	Volkswagen AG
		Heat transfer products	

* Via a directed supply relationship with Hyundai Mobis.

Geographic Operations

We maintain administrative and operational organizations in North America, Europe, South America and Asia Pacific to support our operating segments, assist with the management of affiliate relations and facilitate financial and statutory reporting and tax compliance on a worldwide basis. Our operations are located in the following countries:

North America	Europe		South America	Asia Pacific
Canada	Belgium	South Africa	Argentina	Australia
Mexico	France	Spain	Brazil	China
United States	Germany	Sweden	Colombia	India
	Hungary	Switzerland	Ecuador	Japan
	Italy	United Kingdom		South Korea
	Russia			Taiwan
				Thailand

Our non-U.S. subsidiaries and affiliates manufacture and sell products similar to those we produce in the United States. Operations outside the U.S. may be subject to a greater risk of changing political, economic and social environments, changing governmental laws and regulations, currency revaluations and market fluctuations than our domestic operations. See the discussion of risk factors in Item 1A.

Sales reported by our non-U.S. subsidiaries comprised $3,131 of our 2016 consolidated sales of $5,826. A summary of sales and long-lived assets by geographic region can be found in Note 19 to our consolidated financial statements in Item 8.

Customer Dependence

We are largely dependent on light vehicle, medium- and heavy-duty vehicle and off-highway original equipment manufacturer (OEM) customers. Ford Motor Company (Ford) was the only individual customer accounting for 10% or more of our consolidated sales in 2016. As a percentage of total sales from operations, our sales to Ford were approximately 22% in 2016, 20% in 2015 and 18% in 2014 and our sales to Fiat Chrysler Automobiles (via a directed supply relationship with Hyundai Mobis), our second largest customer, were approximately 9% in 2016, 9% in 2015 and 8% in 2014. Renault-Nissan Alliance, PACCAR Inc and General Motors Company were our third, fourth and fifth largest customers in 2016. Our 10 largest customers collectively accounted for approximately 62% of our sales in 2016.

Loss of all or a substantial portion of our sales to Ford or other large volume customers would have a significant adverse effect on our financial results until such lost sales volume could be replaced and there is no assurance that any such lost volume would be replaced.

Sources and Availability of Raw Materials

We use a variety of raw materials in the production of our products, including steel and products containing steel, stainless steel, forgings, castings and bearings. Other commodity purchases include aluminum, brass, copper and plastics. These materials are typically available from multiple qualified sources in quantities sufficient for our needs. However, some of our operations remain dependent on single sources for certain raw materials.

While our suppliers have generally been able to support our needs, our operations may experience shortages and delays in the supply of raw material from time to time due to strong demand, capacity limitations, short lead times, production schedule increases from our customers and other problems experienced by the suppliers. A significant or prolonged shortage of critical components from any of our suppliers could adversely impact our ability to meet our production schedules and to deliver our products to our customers in a timely manner.

Seasonality

Our businesses are generally not seasonal. However, in the light vehicle market, our sales are closely related to the production schedules of our OEM customers and those schedules have historically been weakest in the third quarter of the year due to a large number of model year change-overs that occur during this period. Additionally, third-quarter production schedules in Europe are typically impacted by the summer vacation schedules and fourth-quarter production is affected globally by year-end holidays.

Backlog

A substantial amount of the new business we are awarded by OEMs is granted well in advance of a program launch. These awards typically extend through the life of the given program. This backlog of new business does not represent firm orders. We estimate future sales from new business using the projected volume under these programs.

Competition

Within each of our markets, we compete with a variety of independent suppliers and distributors, as well as with the in-house operations of certain OEMs. With a renewed focus on product innovation, we differentiate ourselves through efficiency and performance, reliability, materials and processes, sustainability and product extension.

The following table summarizes our principal competitors by operating segment as of December 31, 2016.

Segment	Principal Competitors
Light Vehicle	ZF Friedrichshafen AG
	GKN plc
	American Axle & Manufacturing Holdings, Inc.
	Magna International Inc.
	Wanxiang Group Corporation
	Hitachi Automotive Systems, Ltd.
	IFA ROTORION Holding GmbH
	Neapco, LLC
	Vertically integrated OEM operations
Commercial Vehicle	Meritor, Inc.
	American Axle & Manufacturing Holdings, Inc.
	Hendrickson (a subsidiary of the Boler Company)
	Klein Products Inc.
	Tirsan Kardan
	Vertically integrated OEM operations
Off-Highway	Carraro Group
	ZF Friedrichshafen AG
	GKN plc
	Kessler + Co.
	Meritor, Inc.
	YTO Group
	Comer Industries
	Hema Endustri A.S.
	Vertically integrated OEM operations
Power Technologies	ElringKlinger AG
	Federal-Mogul Corporation
	Freudenberg NOK Group
	MAHLE GmbH
	Modine Manufacturing Company
	Valeo Group
	YinLun Co., LTD
	Denso Corporation

Intellectual Property

Our proprietary driveline and power technologies product lines have strong identities in the markets we serve. Throughout these product lines, we manufacture and sell our products under a number of patents that have been obtained over a period of years and expire at various times. We consider each of these patents to be of value and aggressively protect our rights throughout the world against infringement. We are involved with many product lines and the loss or expiration of any particular patent would not materially affect our sales and profits.

We own or have licensed numerous trademarks that are registered in many countries, enabling us to market our products worldwide. For example, our Spicer®, Victor Reinz® and Long® trademarks are widely recognized in their market segments.

Engineering and Research and Development

Since our introduction of the automotive universal joint in 1904, we have been focused on technological innovation. Our objective is to be an essential partner to our customers and we remain highly focused on offering superior product quality, technologically advanced products, world-class service and competitive prices. To enhance quality and reduce costs, we use statistical process control, cellular manufacturing, flexible regional production and assembly, global sourcing and extensive employee training.

We engage in ongoing engineering and research and development activities to improve the reliability, performance and cost-effectiveness of our existing products and to design and develop innovative products that meet customer requirements for new applications. We are integrating related operations to create a more innovative environment, speed product development, maximize efficiency and improve communication and information sharing among our research and development operations. At December 31, 2016, we had eight stand-alone technical and engineering centers and eight additional sites at which we conduct research and development activities. Our research and development costs were $81 in 2016, $75 in 2015 and $72 in 2014. Total engineering expenses including research and development were $196 in 2016, $183 in 2015 and $176 in 2014.

Our research and development activities continue to improve customer value. For all of our markets, this means drivelines with higher torque capacity, reduced weight and improved efficiency. End-use customers benefit by having vehicles with better fuel economy and reduced cost of ownership. We are also developing a number of power technologies products for vehicular and other applications that will assist fuel cell, battery and hybrid vehicle manufacturers in making their technologies commercially viable in mass production.

Employees

The following table summarizes our employees by operating segment as of December 31, 2016.

Segment	Employees
Light Vehicle	10,100
Commercial Vehicle	5,900
Off-Highway	2,700
Power Technologies	4,900
Technical and administrative	1,300
Total	24,900

Environmental Compliance

We make capital expenditures in the normal course of business as necessary to ensure that our facilities are in compliance with applicable environmental laws and regulations. The cost of environmental compliance has not been a material part of capital expenditures and did not have a material adverse effect on our earnings or competitive position in 2016.

Available Information

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 pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 as amended (Exchange Act) are available, free of charge, on or through our Internet website at http://www.dana.com/investors as soon as reasonably practicable after we electronically file such materials with, or furnish them to, the SEC. Copies of any materials we file with the SEC can also be obtained free of charge through the SEC’s website at http://www.sec.gov, at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549, or by calling the SEC’s Office of Investor Education and Advocacy at 1-800-732-0330. We also post our Corporate Governance Guidelines, Standards of Business Conduct for Members of the Board of Directors, Board Committee membership lists and charters, Standards of Business Conduct and other corporate governance materials on our Internet website. Copies of these posted materials are also available in print, free of charge, to any stockholder upon request from: Dana Incorporated, Investor Relations, P.O. Box 1000, Maumee, Ohio 43537, or via telephone in the U.S. at 800-537-8823 or e-mail at InvestorRelations@dana.com. The inclusion of our website address in this report is an inactive textual reference only and is not intended to include or incorporate by reference the information on our website into this report.

Item 1A. Risk Factors

We are impacted by events and conditions that affect the light vehicle, medium/heavy vehicle and off-highway markets that we serve, as well as by factors specific to Dana. Among the risks that could materially adversely affect our business, financial condition or results of operations are the following, many of which are interrelated.

Risk Factors Related to the Markets We Serve

Failure to sustain a continuing economic recovery in the United States and elsewhere could have a substantial adverse effect on our business.

Our business is tied to general economic and industry conditions as demand for vehicles depends largely on the strength of the economy, employment levels, consumer confidence levels, the availability and cost of credit and the cost of fuel. These factors have had and could continue to have a substantial impact on our business.

We expect global market conditions to result in overall comparable sales in 2017. We expect the North America economic climate will continue to be modestly strong to stable with light vehicle demand levels continuing to be strong, while the medium/heavy truck market is expected to be weaker and the off-highway market remains relatively stable at already weak levels. The economy in Europe is expected to improve modestly, with on-highway markets being slightly stronger while the off-highway market remains weak but stable. The South America countries where we do business are expected to remain relatively weak, but show signs of improvement as we progress through 2017. We expect the rate of growth to be more modest in the Asia Pacific region in 2017, with the markets we serve in the region being relatively stable or facing some headwinds.
Adverse developments in the economic conditions of any of these markets could reduce demand for new vehicles, causing our customers to reduce their vehicle production and, as a result, demand for our products would be adversely affected.

Certain political developments occurring this past year have provided increased economic uncertainty. The United Kingdom's decision to exit the European Union and the results of the presidential election in the U.S. both could result in economic and trade policy actions that would impact economic conditions in various countries, the cost of importing into the U.S. and the competitive landscape of our customers, suppliers and competitors.

Adverse global economic conditions could also cause our customers and suppliers to experience severe economic constraints in the future, including bankruptcy, which could have a material adverse impact on our financial position and results of operations.

We could be adversely impacted by the loss of any of our significant customers, changes in their requirements for our products or changes in their financial condition.

We are reliant upon sales to several significant customers. Sales to our ten largest customers accounted for 62% of our overall sales in 2016. Changes in our business relationships with any of our large customers or in the timing, size and continuation of their various programs could have a material adverse impact on us.

The loss of any of these customers, the loss of business with respect to one or more of their vehicle models on which we have high component content, or a significant decline in the production levels of such vehicles would negatively impact our business, results of operations and financial condition. Pricing pressure from our customers also poses certain risks. Inability on our part to offset pricing concessions with cost reductions would adversely affect our profitability. We are continually bidding on new business with these customers, as well as seeking to diversify our customer base, but there is no assurance that our efforts will be successful. Further, to the extent that the financial condition of our largest customers deteriorates, including possible bankruptcies, mergers or liquidations, or their sales otherwise decline, our financial position and results of operations could be adversely affected.

We may be adversely impacted by changes in international legislative and political conditions.

We operate in 25 countries around the world and we depend on significant foreign suppliers and customers. Further, we have several growth initiatives that are targeting emerging markets like China and India. Legislative and political activities within the countries where we conduct business, particularly in emerging markets and less developed countries, could adversely impact our ability to operate in those countries. The political situation in a number of countries in which we operate could create instability in our contractual relationships with no effective legal safeguards for resolution of these issues, or potentially result in the seizure of our assets. Through January 23, 2015, we operated in Venezuela where government exchange controls and policies placed restrictions on our ability to operate effectively and repatriate funds. Our risk associated with operating in this country was eliminated with the divestiture of our operations in Venezuela on January 23, 2015. However, we expect to continue exporting product to Venezuela, and our ability to do so effectively could be adversely impacted by Venezuela government policies. We operate in Argentina, where trade-related initiatives and other government restrictions limit our ability to optimize operating effectiveness. At December 31, 2016, our net asset exposure related to Argentina was approximately $15, including $10 of net fixed assets.

We may be adversely impacted by the strength of the U.S. dollar relative to the currencies in the other countries in which we do business.

Approximately 54% of our sales in 2016 were from operations located in countries other than the U.S. Currency variations can have an impact on our results (expressed in U.S. dollars). Currency variations can also adversely affect margins on sales of our products in countries outside of the U.S. and margins on sales of products that include components obtained from affiliates or other suppliers located outside of the U.S. Strengthening of the U.S. dollar against the euro and currencies of other countries in which we have operations has had and could continue to have an adverse effect on our results reported in U.S. dollars. We use a combination of natural hedging techniques and financial derivatives to mitigate foreign currency exchange rate risks. Such hedging activities may be ineffective or may not offset more than a portion of the adverse financial impact resulting from currency variations.

We may be adversely impacted by new laws, regulations or policies of governmental organizations related to increased fuel economy standards and reduced greenhouse gas emissions, or changes in existing ones.

The markets and customers we serve are subject to substantial government regulation, which often differs by state, region and country. These regulations, and proposals for additional regulation, are advanced primarily out of concern for the environment (including concerns about global climate change and its impact) and energy independence. We anticipate that the number and extent of these regulations, and the costs to comply with them, will increase significantly in the future.

In the U.S., vehicle fuel economy and greenhouse gas emissions are regulated under a harmonized national program administered by the National Highway Traffic Safety Administration and the Environmental Protection Agency (EPA). Other governments in the markets we serve are also creating new policies to address these same issues, including the European Union, Brazil, China and India. These government regulatory requirements could significantly affect our customers by altering their global product development plans and substantially increasing their costs, which could result in limitations on the types of vehicles they sell and the geographical markets they serve. Any of these outcomes could adversely affect our financial position and results of operations.

Company-Specific Risk Factors

We have taken, and continue to take, cost-reduction actions. Although our process includes planning for potential negative consequences, the cost-reduction actions may expose us to additional production risk and could adversely affect our sales, profitability and ability to attract and retain employees.

We have been reducing costs in all of our businesses and have discontinued product lines, exited businesses, consolidated manufacturing operations and positioned operations in lower cost locations. The impact of these cost-reduction actions on our sales and profitability may be influenced by many factors including our ability to successfully complete these ongoing efforts, our ability to generate the level of cost savings we expect or that are necessary to enable us to effectively compete, delays in implementation of anticipated workforce reductions, decline in employee morale and the potential inability to meet operational targets due to our inability to retain or recruit key employees.

We depend on our subsidiaries for cash to satisfy the obligations of the company.

Our subsidiaries conduct all of our operations and own substantially all of our assets. Our cash flow and our ability to meet our obligations depend on the cash flow of our subsidiaries. In addition, the payment of funds in the form of dividends, intercompany payments, tax sharing payments and otherwise may be subject to restrictions under the laws of the countries of incorporation of our subsidiaries or the by-laws of the subsidiary.

Labor stoppages or work slowdowns at Dana, key suppliers or our customers could result in a disruption in our operations and have a material adverse effect on our businesses.

We and our customers rely on our respective suppliers to provide parts needed to maintain production levels. We all rely on workforces represented by labor unions. Workforce disputes that result in work stoppages or slowdowns could disrupt operations of all of these businesses, which in turn could have a material adverse effect on the supply of, or demand for, the products we supply our customers.

We could be adversely affected if we are unable to recover portions of commodity costs (including costs of steel, other raw materials and energy) from our customers.

We continue to work with our customers to recover a portion of our material cost increases. While we have been successful in the past recovering a significant portion of such cost increases, there is no assurance that increases in commodity costs will not adversely impact our profitability in the future.

We could be adversely affected if we experience shortages of components from our suppliers or if disruptions in the supply chain lead to parts shortages for our customers.

A substantial portion of our annual cost of sales is driven by the purchase of goods and services. To manage and minimize these costs, we have been consolidating our supplier base. As a result, we are dependent on single sources of supply for some components of our products. We select our suppliers based on total value (including price, delivery and quality), taking into consideration their production capacities and financial condition, and we expect that they will be able to support our needs. However, there is no assurance that adverse financial conditions, including bankruptcies of our suppliers, reduced levels of production, natural disasters or other problems experienced by our suppliers will not result in shortages or delays in their supply of components to us or even in the financial collapse of one or more such suppliers. If we were to experience a significant or prolonged shortage of critical components from any of our suppliers, particularly those who are sole sources, and were unable to procure the components from other sources, we would be unable to meet our production schedules for some of our key products and to ship such products to our customers in a timely fashion, which would adversely affect our sales, profitability and customer relations.

Adverse economic conditions, natural disasters and other factors can similarly lead to financial distress or production problems for other suppliers to our customers which can create disruptions to our production levels. Any such supply-chain induced disruptions to our production are likely to create operating inefficiencies that will adversely affect our sales, profitability and customer relations.

We ended the contractual relationship with one of our largest suppliers at the end of 2014 and established relationships with alternative suppliers. During the first half of 2015, as we transitioned to the new suppliers, we were challenged with relatively high levels of demand in the market segment supported by these suppliers. This resulted in increased costs in the first half of 2015. Additionally, our inability to fully satisfy customer demands led to some lost business with a significant customer. There is a risk that our operating results and customer relationships could be adversely impacted if other supplier transitions are not completed effectively.

In 2014, the financial condition of a major supplier to our South America operations led to them pursuing legal reorganization. As more fully described in Notes 2 and 3 of the consolidated financial statements in Item 8, legal actions were required in 2015 to maintain the supply of product from this supplier and, in 2016, we ultimately acquired strategic assets from this supplier necessary to satisfy our customer commitments.

In 2016, the financial condition of a single source supplier to our North American operations led them to request significant price increases which we have not accepted. Although this supplier is providing us with the required supply, there is
continued uncertainty whether we will be able to maintain cost-effective, uninterrupted supply.

Our profitability and results of operations may be adversely affected by program launch difficulties.

The launch of new business is a complex process, the success of which depends on a wide range of factors, including the production readiness of our manufacturing facilities and manufacturing processes and those of our suppliers, as well as factors related to tooling, equipment, employees, initial product quality and other factors. Our failure to successfully launch material new or takeover business could have an adverse effect on our profitability and results of operations.

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 or superior 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 have a material adverse impact on our business and our competitive position.

We could encounter unexpected difficulties integrating acquisitions and joint ventures.

We acquired businesses in 2016, and we expect to complete additional acquisitions and investments in the future that complement or expand our businesses. The success of this strategy will depend on our ability to successfully complete these transactions or arrangements, to integrate the businesses acquired in these transactions and to develop satisfactory working arrangements with our strategic partners in the joint ventures. We could encounter unexpected difficulties in completing these transactions and integrating the acquisitions with our existing operations. We also may not realize the degree or timing of benefits anticipated when we entered into a transaction.

Several of our joint ventures operate pursuant to established agreements and, as such, we do not unilaterally control the joint venture. There is a risk that the partners' objectives for the joint venture may not be aligned with ours, leading to potential differences over management of the joint venture that could adversely impact its financial performance and consequent contribution to our earnings. Additionally, inability on the part of our partners to satisfy their contractual obligations under the agreements could adversely impact our results of operations and financial position.

We could be adversely impacted by the costs of environmental, health, safety and product liability compliance.

Our operations are subject to environmental laws and regulations in the U.S. and other countries that govern emissions to the air; discharges to water; the generation, handling, storage, transportation, treatment and disposal of waste materials; and the cleanup of contaminated properties. Historically, other than an EPA settlement as part of our bankruptcy proceedings, environmental costs related to our former and existing operations have not been material. However, there is no assurance that the costs of complying with current environmental laws and regulations, or those that may be adopted in the future, will not increase and adversely impact us.

There is also no assurance that the costs of complying with current laws and regulations, or those that may be adopted in the future, that relate to health, safety and product liability matters will not adversely impact us. There is also a risk of warranty and product liability claims, as well as product recalls, if our products fail to perform to specifications or cause property damage, injury or death. (See Notes 15 and 16 to our consolidated financial statements in Item 8 for additional information on product liabilities and warranties.)

A failure of our information technology infrastructure could adversely impact our business and operations.

We recognize the increasing volume of cyber attacks and employ commercially practical efforts to provide reasonable assurance that the risks of such attacks are appropriately mitigated. Each year, we evaluate the threat profile of our industry to stay abreast of trends and to provide reasonable assurance our existing countermeasures will address any new threats identified. Despite our implementation of security measures, our IT systems and those of our service providers are vulnerable to circumstances beyond our reasonable control including acts of terror, acts of government, natural disasters, civil unrest and denial of service attacks which may lead to the theft of our intellectual property, trade secrets or business disruption. To the extent that any disruption or security breach results in a loss or damage to our data or an inappropriate disclosure of confidential information, it could cause significant damage to our reputation, affect our relationships with our customers, suppliers and employees, lead to claims against the company and ultimately harm our business. Additionally, we may be required to incur significant costs to protect against damage caused by these disruptions or security breaches in the future.

We participate in certain multi-employer pension plans which are not fully funded.

We contribute to certain multi-employer defined benefit pension plans for our union-represented employees in the U.S. in accordance with our collective bargaining agreements. Contributions are based on hours worked except in cases of layoff or leave where we generally contribute based on 40 hours per week for a maximum of one year. The plans are not fully funded as of December 31, 2016. We could be held liable to the plans for our obligation, as well as those of other employers, due to our participation in the plans. Contribution rates could increase if the plans are required to adopt a funding improvement plan, if the performance of plan assets does not meet expectations or as a result of future collectively bargained wage and benefit agreements. (See Note 11 to our consolidated financial statements in Item 8 for additional information on multi-employer pension plans.)

Changes in interest rates and asset returns could increase our pension funding obligations and reduce our profitability.

We have unfunded obligations under certain of our defined benefit pension and other postretirement benefit plans. The valuation of our future payment obligations under the plans and the related plan assets are subject to significant adverse changes if the credit and capital markets cause interest rates and projected rates of return to decline. Such declines could also require us to make significant additional contributions to our pension plans in the future. A material increase in the unfunded obligations of these plans could also result in a significant increase in our pension expense in the future.

We may incur additional tax expense or become subject to additional tax exposure.

Our provision for income taxes and the cash outlays required to satisfy our income tax obligations in the future could be adversely affected by numerous factors. These factors include changes in the level of earnings in the tax jurisdictions in which we operate, changes in the valuation of deferred tax assets, changes in our plans to repatriate the earnings of our non-U.S. operations to the U.S. and changes in tax laws and regulations. The 2016 presidential election in the U.S. has resulted in an administration and Congress that are controlled by the same party. Changes to tax policy and tax rates are considered likely and, depending on the nature of these changes, could have a significant impact on our business and financial results. Our income tax returns are subject to examination by federal, state and local tax authorities in the U.S. and tax authorities outside the U.S. The results of these examinations and the ongoing assessments of our tax exposures could also have an adverse effect on our provision for income taxes and the cash outlays required to satisfy our income tax obligations.

Our ability to utilize our net operating loss carryforwards may be limited.

Net operating loss carryforwards (NOLs) approximating $796 were available at December 31, 2016 to reduce future U.S. income tax liabilities. Our ability to utilize these NOLs may be limited as a result of certain change of control provisions of the U.S. Internal Revenue Code of 1986, as amended (Code). Of this amount, NOLs of approximately $577 are treated as losses incurred before the change of control upon emergence from Chapter 11 and are limited to annual utilization of $84. The balance of our NOLs, treated as incurred subsequent to the change in control, is not subject to limitation as of December 31, 2016. However, there can be no assurance that trading in our shares will not effect another change in control under the Code, which would further limit our ability to utilize our available NOLs. Such limitations may cause us to pay income taxes earlier and in greater amounts than would be the case if the NOLs were not subject to limitation.

Risk Factors Related to our Securities

Provisions in our Restated Certificate of Incorporation and Bylaws may discourage a takeover attempt.

Certain provisions of our Restated Certificate of Incorporation and Bylaws, as well as the General Corporation Law of the State of Delaware, may have the effect of delaying, deferring or preventing a change in control of Dana. Such provisions, including those governing the nomination of directors, limiting who may call special stockholders' meetings and eliminating stockholder action by written consent, may make it more difficult for other persons, without the approval of our board of directors, to make a tender offer or otherwise acquire substantial amounts of common stock or to launch other takeover attempts that a stockholder might consider to be in such stockholder's best interest.

Item 1B. Unresolved Staff Comments

The Company has received no written comments regarding its periodic or current reports from the staff of the SEC that were issued 180 days or more preceding the end of its 2016 fiscal year and that remain unresolved.

Item 2. Properties

Type of Facility	North America	Europe	South America	Asia Pacific	Total
Light Vehicle					
Manufacturing/Distribution	13	3	5	9	30
Commercial Vehicle					
Manufacturing/Distribution	8	4	5	4	21
Off-Highway					
Manufacturing/Distribution	2	8		2	12
Power Technologies					
Manufacturing/Distribution	12	4		1	17
Technical and Engineering Centers	3				3
Corporate and other					
Administrative Offices	2			1	3
Technical and Engineering Centers - Multiple Segments	2			3	5
	42	19	10	20	91

As of December 31, 2016, we operated in 25 countries and had 91 major facilities housing manufacturing and distribution operations, technical and engineering centers and administrative offices. In addition to the eight stand-alone technical and engineering centers in the table above, we have eight technical and engineering centers housed within manufacturing sites. We lease 34 of these facilities and a portion of four others and own the remainder. We believe that all of our property and equipment is properly maintained.

Our world headquarters is located in Maumee, Ohio. This facility and other facilities in the greater Detroit, Michigan and Maumee, Ohio areas house functions that have global or North American regional responsibility for finance and accounting, treasury, risk management, legal, human resources, procurement and supply chain management, communications and information technology.

Item 3. Legal Proceedings

We are a party to various pending judicial and administrative proceedings that arose in the ordinary course of business. After reviewing the currently pending lawsuits and proceedings (including the probable outcomes, reasonably anticipated costs and expenses and our established reserves for uninsured liabilities), we do not believe that any liabilities that may result from these proceedings are reasonably likely to have a material adverse effect on our liquidity, financial condition or results of operations. Legal proceedings are also discussed in Notes 3 and 15 to our consolidated financial statements in Item 8.

PART II

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

Market information — Our common stock trades on the New York Stock Exchange (NYSE) under the symbol "DAN." The following table shows the high and low prices of our common stock as reported by the NYSE for each of our fiscal quarters during 2016 and 2015.

	2016		2015	
	High	Low	High	Low
Fourth quarter	$19.81	$13.93	$18.12	$13.01
Third quarter	15.70	9.80	20.81	15.33
Second quarter	14.55	10.21	22.73	20.35
First quarter	14.32	10.62	23.48	20.04

Holders of common stock — Based on reports by our transfer agent, there were approximately 3,494 registered holders of our common stock on January 31, 2017.

Reference is made to the Equity Compensation Plan Information section of Item 12 for certain information regarding our equity compensation plans.

Stockholder return — The following graph shows the cumulative total shareholder return for our common stock since December 31, 2011. The graph compares our performance to that of the Standard & Poor's 500 Stock Index (S&P 500) and the Dow Jones US Auto Parts Index. The comparison assumes $100 was invested at the closing price on December 31, 2011. Each of the returns shown assumes that all dividends paid were reinvested.

Performance chart

Index	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016
Dana Incorporated	$ 100.00	$ 129.28	$ 162.96	$ 181.52	$ 119.84	$ 172.21
S&P 500	100.00	116.00	153.58	174.60	177.01	198.18
Dow Jones US Auto Parts Index	100.00	111.90	174.63	193.20	186.03	196.10

Dividends — We declared and paid quarterly common stock dividends in 2016 and 2015, raising the dividend from five cents to six cents per share in the second quarter of 2015.

Issuer's purchases of equity securities — Our Board of Directors approved an expansion of our existing common stock share repurchase program from $1,400 to $1,700 on January 11, 2016. The share repurchase program expires on December 31, 2017. We repurchase shares utilizing available excess cash either in the open market or through privately negotiated transactions. The stock repurchases are subject to prevailing market conditions and other considerations. During the second half of 2016, there were no shares of our common stock repurchased under the program. Approximately $219 remained available under the program for future repurchases as of December 31, 2016.

Annual meeting — We will hold an annual meeting of stockholders on April 27, 2017.

Item 6. Selected Financial Data

	Year Ended December 31,				
	2016	2015	2014	2013	2012
Operating Results					
Net sales	$5,826	$6,060	$6,617	$6,769	$7,224
Income from continuing operations before income taxes	215	292	260	368	364
Income from continuing operations	653	176	343	261	315
Income (loss) from discontinued operations		4	(15)	(1)	—
Net income	653	180	328	260	315
Net income attributable to the parent company	$640	$159	$319	$244	$300
Preferred stock dividend requirements	—	—	7	25	31
Preferred stock redemption premium	—	—	—	232	—
Net income (loss) available to common stockholders	$640	$159	$312	$(13)	$269
Net income (loss) per share available to common stockholders					
Basic					
Income (loss) from continuing operations	$4.38	$0.98	$2.07	$(0.08)	$1.82
Income (loss) from discontinued operations	—	0.02	(0.10)	(0.01)	—
Net income (loss)	4.38	1.00	1.97	(0.09)	1.82
Diluted					
Income (loss) from continuing operations	$4.36	$0.97	$1.93	$(0.08)	$1.40
Income (loss) from discontinued operations	—	0.02	(0.09)	(0.01)	—
Net income (loss)	4.36	0.99	1.84	(0.09)	1.40
Depreciation and amortization of intangibles	$182	$174	$213	$262	$277
Net cash provided by operating activities	384	406	510	577	339
Purchases of property, plant and equipment	322	260	234	209	164
Financial Position					
Cash and cash equivalents and marketable securities	$737	$953	$1,290	$1,366	$1,119
Total assets	4,860	4,301	4,893	5,068	5,097
Long-term debt, less debt issuance costs	1,595	1,553	1,588	1,541	790
Total debt	1,664	1,575	1,653	1,598	891
Preferred stock	—	—	—	372	753
Common stock and additional paid-in capital	2,329	2,313	2,642	2,842	2,670
Treasury stock	(83)	(1)	(33)	(366)	(25)
Total parent company stockholders' equity	1,157	728	1,080	1,309	1,836
Book value per share	$7.92	$4.58	$6.83	$8.94	$12.41
Common Share Information					
Dividends declared per common share	$0.24	$0.23	$0.20	$0.20	$0.20
Weighted-average common shares outstanding					
Basic	146.0	159.0	158.0	146.4	148.0
Diluted	146.8	160.0	173.5	146.4	214.7
Market prices					
High	$19.81	$23.48	$24.82	$23.46	$16.76
Low	9.80	13.01	16.81	15.17	11.13

Note: Total assets for 2015, 2014, 2013 and 2012 have been recast to reflect the adoption of the accounting standard requiring all deferred income tax liabilities and assets to be classified as noncurrent on the balance sheet rather than separated into current and noncurrent amounts. The recasting of total assets resulted in reductions of $25, $12, $35 and $34 for 2015, 2014, 2013 and 2012. See Note 1 to our consolidated financial statements in Item 8 for additional information.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations (Dollars in millions)

Management's discussion and analysis of financial condition and results of operations should be read in conjunction with the financial statements and accompanying notes in Item 8.

Management Overview

We are a global provider of high technology driveline, sealing and thermal-management products for virtually every major vehicle manufacturer in the on-highway and off-highway markets. Our driveline products – axles, driveshafts and transmissions – are delivered through our Light Vehicle Driveline Technologies (Light Vehicle), Commercial Vehicle Driveline Technologies (Commercial Vehicle) and Off-Highway Driveline Technologies (Off-Highway) operating segments. Our fourth global operating segment – Power Technologies – is the center of excellence for the sealing and thermal technologies that span all customers in our on-highway and off-highway markets. We have a diverse customer base and geographic footprint which minimizes our exposure to individual market and segment declines. In 2016, 54% of our sales came from North American operations and 46% from operations throughout the rest of the world. Our sales by operating segment were Light Vehicle – 45%, Commercial Vehicle – 21%, Off-Highway – 16% and Power Technologies – 18%.

Operational and Strategic Initiatives

In 2016 we outlined our current enterprise strategy which leverages our strong technology foundation and our commitment to continuous improvement. Our strategy places increased focus leveraging resources across the organization, satisfying customer requirements, expanding products and markets and accelerating commercialization of new technology.

Central to our strategy is leveraging our core operations by sharing our capabilities, technology, assets and people across the enterprise, leading to improved execution and increased customer satisfaction. Although we have taken significant strides to improve our profitability and margins, particularly through streamlining and rationalizing our manufacturing activities, we believe additional opportunities remain to further improve our cost performance. Leveraging investments across multiple end markets and making disciplined, value enhancing acquisitions, will allow us to bring product to market faster, grow our top-line sales and enhance financial returns.

Strengthening customer centricity and expanding global markets are key elements of our strategy that focus on market penetration. Foundational to growing the business is directing the entire organization to putting the customer at the center of our value system and shifting from transactional to relationship-based interactions. These relationships are built on a foundation of providing unparalleled technology with exceptional quality, delivery and value. With even stronger relationships we will be better positioned to support our customers' most important global and flagship programs and capitalize on future growth opportunities.

We continue to enhance and expand our global footprint, optimizing it to capture growth across all of our end markets. Specifically, our manufacturing and technology center footprint positions us to support customers globally – an important factor as many of our customers are increasingly focused on common solutions for global platforms. While growth opportunities are present in each region of the world, we have a primary focus on building our presence and local capability in the Asia Pacific region. Over the last few years, we have opened two new engineering facilities in the region and recently new gear manufacturing facilities were established in India and Thailand.

In addition to Asia, we see further growth opportunity in Eastern Europe where we recently announced plans to establish a new gear manufacturing facility in Hungary. This will be our third facility in the country and will give us the capability to cost effectively manufacture gears, one of our core technologies, and efficiently service our customers within the region.

The final two elements of our enterprise strategy, commercializing new technology and accelerating hybridization and electrification, focus on opportunities for product expansion. Bringing new innovations to market as industry leading products will drive growth as our new products and technology provide our customers with cutting edge solutions, address end user needs and capitalize on key market trends. An example is our industry leading electronically disconnecting all-wheel drive technology, which we believe is the most fuel efficient rapidly disconnecting system in the market, was recently selected by a major global customer for a significant new global vehicle platform – opening up new commercial channels for us in the passenger car, crossover and sport utility vehicle markets.

Initiatives to capitalize on evolving hybridization and electrification vehicle trends are a core ingredient of the current strategy. In addition to our current technologies in battery cooling and fuel cells, this element of the strategy is leveraging our electronics controls expertise across all our business units and applications such as advanced vehicle hybridization and electrification initiatives. We are working with customers to develop new solutions for those markets where electrification will be adopted first such as hybrids, buses and urban delivery vehicles. These new solutions, which include advanced electric propulsion systems with fully integrated motors and controls, are included in our recently launched Spicer Electrified portfolio of products.

The development and implementation of this enterprise strategy is positioning Dana to grow profitably over the next few years due to increased customer focus as we leverage our core capabilities, expand into new markets, develop and commercialize new technologies including for hybrid and electric vehicles.

Shareholder returns and capital structure actions — When evaluating capital structure initiatives, we balance our growth opportunities and shareholder value initiatives with maintaining a strong balance sheet and access to capital. Our strong financial position has enabled us to simplify our capital structure while providing returns to our shareholders in the form of cash dividends and reduction in the number of shares outstanding. Over the past four years, we returned $1,481 of cash to shareholders in connection with redemption of all of our preferred stock and repurchase of common shares. From program inception in 2012 through December 31, 2016, we repurchased approximately 74 million shares, inclusive of the common share equivalent reduction resulting from redemption of preferred shares. Remaining share repurchase authorization under the program approved by our Board of Directors is $219. We declared and paid quarterly common stock dividends over the past four years, raising the dividend from five cents to six cents per share in the second quarter of 2015.

We have taken advantage of the lower interest rate environment to refinance our senior notes at lower rates while extending the maturities. In December 2014 and the first quarter of 2015, we completed the redemption of notes maturing in 2019, replacing them with notes maturing in 2024. During the second quarter of 2016, we redeemed notes maturing in 2021, replacing them with notes maturing in 2026.

Aftermarket opportunities — We have a global group dedicated to identifying and developing aftermarket growth opportunities that leverage the capabilities within our existing businesses – targeting increased future aftermarket sales. In January 2016, we completed the acquisition of Magnum® Gaskets' (Magnum) aftermarket distribution business which includes the Magnum brand, product portfolio, existing customer contracts and distribution rights. The Magnum brand is the third largest aftermarket sealing brand in the U.S. and Canada, providing us with access to new customers for sealing products and an additional aftermarket channel for other products.

Selective acquisitions — Our acquisition focus is principally directed at “bolt-on” or adjacent acquisition opportunities that have a strategic fit with our existing core businesses, particularly opportunities that support our enterprise strategy and enhance the value proposition of our product offerings. Any potential acquisition will be evaluated in the same manner we currently consider customer program opportunities and other uses of capital – with a disciplined financial approach designed to ensure profitable growth and increased shareholder value.

Acquisitions

SIFCO — On December 23, 2016, we acquired strategic assets of the commercial vehicle steer axle systems and related forged components businesses of SIFCO. The acquisition enables us to enhance our vertically integrated supply chain, which will further improve our cost structure and customer satisfaction by leveraging SIFCO's extensive experience and knowledge of sophisticated forged components. In addition to strengthening our position as a central source for products that use forged and machined parts throughout the region, this acquisition enables us to better accommodate the local content requirements of our customers, which reduces their import and other region-specific costs.

In 2011, we began purchasing parts from SIFCO under an exclusive supply agreement. In April 2014, SIFCO began operating with judicial oversight under reorganization proceedings in Brazil. We continued purchasing parts from SIFCO under an interim agreement while also pursuing the purchase of certain assets through the judicial reorganization proceedings. In connection with the December 2016 acquisition, we acquired the assets supporting the business previously conducted under the exclusive supply agreement along with certain additional related business. As part of the acquisition, we added two manufacturing facilities and approximately 1,400 employees. The strategic assets were acquired by Dana free and clear of any liens, claims or encumbrances, and without assumption of any legacy liabilities of SIFCO. We had sales of $86 in 2016 resulting from business conducted under the previous supply agreement with SIFCO. With the acquisition completed in December 2016, we obtained additional business relationships that are expected to generate incremental sales of approximately $50 at current production levels.

The purchase price was $69, with the payment of $9 of the purchase price deferred until December 2017 pending any claims under indemnification provisions of the purchase agreement. The purchase price is subject to customary post-closing adjustments for final determination of working capital and other items. Reference is made to Note 2 of the consolidated financial statements in Item 8 of Part II for the allocation of purchase consideration to assets acquired and liabilities assumed. The results of operations of the SIFCO related business are reported within our Commercial Vehicle operating segment.

Magnum — On January 29, 2016, we acquired the aftermarket distribution business of Magnum, a U.S.-based supplier of gaskets and sealing products for automotive and commercial vehicle applications, for a purchase price of $18 at closing and additional cash payments of up to $2 contingent upon the achievement of certain sales metrics over a future two-year period. As of the closing date of the acquisition, the contingent consideration was assigned a fair value of approximately $1. Assets acquired included trademarks and trade names, customer relationships and goodwill. The results of operations of Magnum are reported within our Power Technologies operating segment.

Brevini — On February 1, 2017, we acquired 80% ownership interests in Brevini Fluid Power S.p.A. (BFP) and Brevini Power Transmission S.p.A. (BPT) from Brevini Group S.p.A. (Brevini). The acquisition expands our Off-Highway operating segment product portfolio to include technologies for tracked vehicles, doubling our addressable market for off-highway driveline systems and establishing Dana as the only off-highway solutions provider that can manage the power to both move the equipment and perform its critical work functions. This acquisition also brings a platform of technologies that can be leveraged in our light and commercial vehicle end markets, helping to accelerate our hybridization and electrification initiatives. The acquisition is expected to add approximately $350 of sales and $35 of adjusted EBITDA in 2017.

We paid €167 at closing, using cash on hand, and intend to refinance debt assumed in the transaction during the first quarter of 2017. The purchase price is subject to adjustment upon determination of the net indebtedness and net working capital levels of BFP and BPT as of the closing date. The terms of the agreement provide Dana the right to call Brevini's noncontrolling interests in BFP and BPT, and Brevini the right to put its noncontrolling interests in BFP and BPT to Dana, assuming Dana does not exercise its call rights, at dates and prices defined in the agreement.

Divestitures

Nippon Reinz — On November 30, 2016, we sold our 53.7% interest in Nippon Reinz Co. Ltd. (Nippon Reinz) to Nichias Corporation. Dana received net cash proceeds of $5 and recognized a pre-tax loss of $3 on the divestiture of Nippon Reinz, inclusive of the derecognition of the related noncontrolling interest. Nippon Reinz had sales of $42 in 2016 through the transaction date.

Dana Companies — On December 30, 2016, we completed the divestiture of Dana Companies, LLC (DCLLC), a consolidated wholly-owned limited liability company that was established as part of our reorganization in 2008 to hold and manage personal injury asbestos claims retained by the reorganized Dana Corporation, which was merged into DCLLC. The assets of DCLLC at time of sale included cash and marketable securities along with the rights to insurance coverage in place to satisfy a significant portion of its liabilities. We received net cash proceeds of $29 at closing on December 30, 2016, with $3 retained by the purchaser subject to the satisfaction of certain future conditions that we expect will be achieved in 2017. We recognized a pre-tax loss of $77 in 2016 upon completion of the transaction. In the event the conditions associated with the retained purchase price of $3 are satisfied in the future, income of $3 will be recognized at such time. Following completion of the sale, Dana has no obligation with respect to current or future asbestos claims. The sale of this business also enhanced our available liquidity since the net proceeds from the sale are available for use in our core businesses.

Disposal of operations in Venezuela — The operating, political and economic environment in Venezuela in recent years was very challenging. Foreign exchange controls restricted our ability to import required parts and material and satisfy the related U.S. dollar obligations. Production activities were curtailed for most of 2014 as our major original equipment customers suspended production, with a limited amount of activity coming back on line later in the year. Our sales in Venezuela during 2014 approximated $110 as compared to $170 in 2013. Results of operations were adversely impacted by the reduced production levels making break-even operating performance a significant challenge. Further, devaluations of the bolivar along with other foreign exchange developments provided added volatility to results of operations and increased uncertainty around future performance.

In December 2014, we entered into an agreement to divest our operations in Venezuela (the disposal group) to an unaffiliated company for no consideration. We completed the divestiture in January 2015. In connection with the divestiture, we entered into a supply and technology agreement whereby Dana will supply product and technology to the operations at competitive market prices. Dana has no obligations to otherwise provide support to the operations. The disposal group was classified as held for sale at December 31, 2014, and we recognized a net charge of $77 – an $80 loss to adjust the carrying value of the net assets to fair value less cost to sell, with a reduction of $3 for the noncontrolling interest share of the loss. These assets and liabilities were presented as held for sale on our December 31, 2014 balance sheet. Upon completion of the divestiture of the disposal group in January 2015, we recognized a gain of $5 on the derecognition of the noncontrolling interest in a former Venezuelan subsidiary in Other income, net. We also credited other comprehensive loss attributable to the parent for $10 and other comprehensive loss attributable to noncontrolling interests for $1 to eliminate the unrecognized pension expense recorded in accumulated other comprehensive loss. See Note 3 to our consolidated financial statements in Item 8 for additional information. With the completion of the sale in January 2015, Dana has no remaining investment in Venezuela.

Structural Products Business — In 2010, we completed the sale of substantially all of the assets of our Structural Products business to Metalsa S.A. de C.V. (Metalsa) and reached a final agreement with the buyer on disputed issues in May 2014. Prior to the third quarter of 2012, Structural Products was reported as an operating segment of continuing operations. With the cessation of the retained operations in the third quarter of 2012, we began reporting the activities relating to the Structural Products business as discontinued operations. Legal and other costs incurred in 2014 to settle a customer complaint and the remaining disputes with Metalsa and insurance recoveries in 2015 related to previously outstanding claims have extended the reporting of discontinued operations.

Segments

We manage our operations globally through four operating segments. Our Light Vehicle and Power Technologies segments primarily support light vehicle original equipment manufacturers (OEMs) with products for light trucks, SUVs, CUVs, vans and passenger cars. The Commercial Vehicle segment supports the OEMs of on-highway commercial vehicles (primarily trucks and buses), while our Off-Highway segment supports OEMs of off-highway vehicles (primarily wheeled vehicles used in construction, mining and agricultural applications).

Trends in Our Markets

Global Vehicle Production

(Units in thousands)	Dana 2017 Outlook			Actual 2016	2015	2014
North America						
Light Truck (Full Frame)	4,200	to	4,300	4,438	4,136	3,834
Light Vehicle Engines	15,800	to	16,200	16,065	15,474	15,119
Medium Truck (Classes 5-7)	235	to	250	235	237	226
Heavy Truck (Class 8)	190	to	210	227	323	297
Agricultural Equipment	50	to	60	53	58	64
Construction/Mining Equipment	150	to	160	150	158	158
Europe (including Eastern Europe)						
Light Truck	9,300	to	9,500	9,279	8,546	7,790
Light Vehicle Engines	23,800	to	24,300	23,224	22,570	21,510
Medium/Heavy Truck	440	to	470	471	434	397
Agricultural Equipment	190	to	210	193	202	220
Construction/Mining Equipment	290	to	310	290	299	301
South America						
Light Truck	1,000	to	1,050	1,010	940	1,146
Light Vehicle Engines	2,000	to	2,100	2,091	2,439	3,176
Medium/Heavy Truck	75	to	85	70	88	167
Agricultural Equipment	25	to	35	29	32	43
Construction/Mining Equipment	10	to	15	10	13	17
Asia-Pacific						

Light Truck	26,500	to	27,500	27,179	24,160	22,337
Light Vehicle Engines	50,000	to	51,500	50,075	47,209	46,497
Medium/Heavy Truck	1,450	to	1,550	1,620	1,383	1,573
Agricultural Equipment	680	to	720	648	676	710
Construction/Mining Equipment	380	to	410	396	405	509

North America

Light vehicle markets — Improving economic conditions during the past few years have contributed to increased light vehicle sales and production levels in North America. Release of built-up demand to replace older vehicles, greater availability of credit, stronger consumer confidence and other factors have combined to stimulate new vehicle sales. Light vehicle sales in 2016 increased about 1% from 2015, with sales that year being up 6% from 2014. Many of our programs are focused in the full frame light truck segment. Helped by comparatively lower fuel prices, sales in this segment were especially strong, being up about 6% in 2016 and 9% in 2015. Production levels were reflective of the stronger light vehicle sales. Production of approximately 17.8 million light vehicles in 2016 was 2% higher than in 2015, following an increase in production that year of about 3% from 2014. Light vehicle engine production was similarly higher, up 4% in 2016 and 2% in 2015. In the key full frame light truck segment, production levels increased about 7% in 2016 compared with an increase of 8% in 2015. Days' supply of total light vehicles in the U.S. at the end of December 2016 was around 62 days, up slightly from 61 days at December 2015 and 2014. In the full frame light truck segment, inventory levels have been relatively stable – 65 days at the end of December 2016, compared with 62 days at the end of 2015 and 63 days at the end of 2014.

Looking ahead to 2017, we expect steady employment levels, stable fuel prices and favorably trending consumer confidence will provide a generally solid economic climate in North America. However, with the strength in this market the past couple years, we believe slightly lower production levels are likely. Our full year 2017 outlook for light vehicle engine production is 15.8 to 16.2 million units, a decrease of 2% to an increase of 1% compared with 2016. In the full frame light truck segment where the past two years have been especially strong, our 2017 production outlook is 4.2 to 4.3 million units, a decrease of 3 to 5% from 2016.

Medium/heavy vehicle markets — Similar to the light vehicle market, the commercial vehicle segment benefited from an improving North America economy in recent years. After increasing 12% in 2014, Medium duty Classes 5-7 truck production the past three years has been relatively stable, between 226,000 and 237,000 units. In the Class 8 segment, production levels increased 21% in 2014 and another 9% in 2015 to reach 323,000 units. High levels of production in 2014 and the first half of 2015 led to more trucks than required for freight demand. As such, order levels and production began declining in the second half of 2015 and continued into 2016, resulting in Class 8 production of around 227,000 units, a decline of about 30% from 2015.

With new government leadership in the U.S. in 2017, there is considerable uncertainty around the potential impact of policy changes on the economy. Although modest economic growth is forecast in 2017, more Class 8 trucks are expected to be in service than are needed to satisfy freight demand levels. Accordingly, we expect weaker Class 8 production of around 200,000 units in 2017, a reduction of about 12% from 2016. In the medium duty segment, we expect 2017 production to be in the range of 235,000 to 250,000 units, comparable to up about 6% from 2016.

Markets Outside of North America

Light vehicle markets — Signs of an improved overall European economy have been evident, albeit mixed at times, during the past few years. Reflective of a modestly improved economy, light vehicle production levels have increased with light vehicle engine production being up about 3% in 2016 after increasing 5% in 2015 and light truck production being higher by 9 to 10% in each of the past two years. The United Kingdom's decision in 2016 to withdraw from the European Union along with political developments in other European countries has cast an element of uncertainty around continued economic improvement in the region. At present, we expect overall stable to improving economic conditions across the entire region in 2017, with production levels up more modestly in the range of 2% to 5% for light vehicle engines and flat to up 2% for light trucks. The economic climate in most South America markets the past couple years has been weak, volatile and challenging. Light truck production declined 12% in 2014 and was down another 18% in 2015. Light vehicle engine production was similarly down 16% in 2014 and another 23% in 2015.

Overall weakness persisted through 2016, with light vehicle engine production down another 14%, but with light truck production showing some improvement in the region with an increase of 7% from 2015. We believe that the region's economic weakness has largely plateaued, and that we'll begin to see some improving market conditions in 2017. Our full year 2017 outlook for South America light vehicle markets has light truck production flat to up 4% and light vehicle engine production flat to down 4% compared with 2016. The Asia Pacific markets have been relatively strong the past few years. Light truck production increased 9% in 2014, 8% in 2015 and was up another 12% in 2016, while light vehicle engine production increased 3% in 2014, 2% in 2015 and another 6% in 2016. We expect to see relatively stable to modest growth in the region during 2017. Our full year 2017 outlook for the Asia Pacific light vehicle markets has light truck production down 2% to up 1% and light vehicle engine production flat to up 3% compared with 2016.

Medium/heavy vehicle markets — Some of the same factors referenced above that affected light vehicle markets outside of North America similarly affected the medium/heavy markets, albeit with improvements in the medium/heavy truck market being a little slower to manifest. Signs of a strengthening European market emerged in 2015 with medium/heavy truck production in 2015 being up about 9% from the preceding year. Production levels in 2016 reflected continued improvement with an increase of about 9% from 2015. Given the higher production levels the past two years and more modest overall economic growth in 2017, we expect Europe medium/heavy truck production this year to be flat to down 7% compared to 2016. A weakening South America economic climate beginning in 2014 led to medium/heavy truck production declining about 23% in 2014, 47% in 2015 and another 20% in 2016. As with the light vehicle markets, we have seen additional weakness in South America in early 2016. As indicated above, we expect to see improving economic conditions in the region as we move through 2017. Our full year 2017 outlook for South America has medium/heavy truck production increasing from about 70,000 units in 2016 to 75,000 to 85,000 units this year. The medium/heavy truck market in Asia Pacific was sluggish the prior two years, being up a modest 3% in 2014 and declining about 12% in 2015 as a slowdown in the China market materialized. A stronger than expected China market and an improving India market contributed to higher medium/heavy truck production in the region of about 17% in 2016. Given a more modest overall economic outlook for the region in 2017 and the strong level of production in 2016, we expect 2017 medium/heavy truck production outlook to be 4% to 10% lower than in 2016.

Off-Highway Markets — Our off-highway business has a large presence outside of North America, with more than 75% of its sales coming from Europe and more than 10% from South America and Asia Pacific combined. We serve several segments of the diverse off-highway market, including construction, agriculture, mining and material handling. Our largest markets are the construction/mining and agricultural equipment segments. After experiencing increased global demand in 2011 and 2012, these markets have been relatively weak over the past four years. Global demand in the agriculture market was down about 11% in 2014, 7% in 2015 and 5% in 2016. The construction/mining segment weakened about 4% in 2014, 11% in 2015 and 3% in 2016. We expect global demand will continue to be relatively weak in 2017, with improving markets to begin in late 2017 and subsequent years. We expect higher global production in the agriculture segment in 2017, driven by stronger demand in the Asia Pacific region. In the construction market, we expect 2017 global production on balance to be relatively comparable to up slightly from 2016.

Foreign Currency and Brexit Effects

Weaker international currencies relative to the U.S. dollar have had a significant impact on our sales and results of operations the past few years. The United Kingdom's decision to exit the European Union ("Brexit") has provided further uncertainty and potential volatility around European currencies, along with uncertain effects of future trade and other cross-border activities of the United Kingdom with the European Union and other countries. With new government leadership in the U.S. assuming control in early 2017, there is added uncertainly around future economic and trade policy and its potential impact on the U.S. dollar relative to other currencies. Approximately 54% of our consolidated sales in 2016 were outside the U.S., with euro zone countries, Mexico, the United Kingdom and Brazil accounting for approximately 40%, 8%, 6% and 6% of our non-U.S. sales. The potential impact of future U.S. economic and trade policy has led to significant weakening of the Mexican peso against the U.S. dollar since the U.S. presidential election in November 2016. Although sales in Argentina and South Africa are each less than 5% of our non-U.S. sales, weaker currencies of those countries significantly impacted this past year's sales. Translation of our international activities at average exchange rates in 2015 as compared to average rates in 2014 reduced sales by $516, with $268 attributable to a weaker euro and $91 to a weaker Brazil real. In 2016, weaker international currencies reduced sales by another $173. A weaker Argentine peso, British pound, Mexican peso, South African rand and Brazilian real reduced sales by $70, $23, $19, $18 and $11. The euro was relatively stable in 2016. Weaker international currencies are expected to be a headwind to sales again in 2017. Based on our current sales outlook, we expect the translation effect of weaker currencies will reduce 2017 sales by approximately $150, with the impact of an expected weaker euro comprising about $70 of the headwind. Our 2017 outlook is based on an assumed euro/U.S. dollar rate of 1.05, a U.S. dollar/Brazil real rate of 3.80, a British pound/U.S. dollar rate of 1.30 and a U.S. dollar/Mexican peso rate of 21.0. At sales levels in our current outlook for 2017, a 5% movement on the euro would impact our annual sales by approximately $65. A 5% change on the Brazil real, British pound or Mexican peso rates would impact our annual sales in each of those countries by approximately $10.

Brazil Market

The Brazil market is an important market for our Commercial Vehicle segment, representing about 12% of this segment's 2016 sales. Our medium/heavy truck sales in Brazil account for approximately 75% of our total sales in the country. Reduced market demand resulting from the weak economic environment in Brazil in 2015 led to production levels in the light vehicle and medium/heavy duty vehicle markets that were lower by about 22% and 44% from 2014. Continued weakness in 2016 resulted in further reductions in medium/heavy truck production of about 20% and a light vehicle production decline of around 10%. As a consequence, sales by our operations in Brazil for 2016 approximated $200, down from about $500 in 2014. In response to the challenging economic conditions in this country, we implemented restructuring and other cost reduction actions the past two years and continue to trim costs to the extent practicable. The economic environment led to one of our major suppliers operating with judicial oversight after entering reorganization proceedings in Brazil in 2014. We continued to work with this supplier to enable us to satisfy our customer requirements while also pursuing the option of purchasing certain assets from this supplier through the judicial reorganization proceedings. As discussed in Note 2 to our consolidated financial statements in Item 8, we completed a transaction in December 2016 that provided us with the underlying assets and personnel supporting our pre-existing business with this supplier along with some incremental business. Looking ahead to 2017, we expect to begin seeing improving market conditions in Brazil, leading to stronger vehicle production levels. With the above-mentioned acquisition, we have enhanced our competitive position in the market and should benefit significantly in future years as the Brazilian markets rebound.

Commodity Costs

The cost of our products may be significantly impacted by changes in raw material commodity prices, the most important to us being those of various grades of steel, aluminum, copper and brass. The effects of changes in commodity prices are reflected directly in our purchases of commodities and indirectly through our purchases of products such as castings, forgings, bearings and component parts that include commodities. Most of our major customer agreements provide for the sharing of significant commodity price changes with those customers. Where such formal agreements are not present, we have historically been successful implementing price adjustments that largely compensate for the inflationary impact of material costs. Material cost changes will customarily have some impact on our financial results as customer pricing adjustments typically lag commodity price changes.

Higher commodity prices, driven in part by inflationary costs in Argentina, increased our costs by approximately $8 in 2016, while in 2015 lower commodity prices decreased costs by $10. In 2014, higher commodity prices increased cost by $35. Material recovery and other pricing actions increased sales by $10 in 2016, $1 in 2015 and $65 in 2014.

Sales, Earnings and Cash Flow Outlook

	2017 Outlook	2016	2015	2014
Sales	$6,200 - $6,400	$5,826	$6,060	$6,617
Adjusted EBITDA	$695 - $725	$660	$652	$746
Net cash provided by operating activities	$410 - $450	$384	$406	$510
Purchases of property, plant and equipment	$350 - $370	$322	$260	$234
Free Cash Flow	$50 - $90	$62	$146	$276

Adjusted EBITDA and Free Cash Flow are non-GAAP financial measures. See the Non-GAAP Financial Measures discussion below for definitions of our non-GAAP financial measures and reconciliations to the most directly comparable U.S. generally accepted accounting principles (GAAP) measures. We have not provided a reconciliation of our adjusted EBITDA outlook to the most comparable GAAP measure of net income. Providing net income guidance is potentially misleading and not practical given the difficulty of projecting event driven transactional and other non-core operating items that are included in net income, including restructuring actions, asset impairments and income tax valuation adjustments. The accompanying reconciliations of these non-GAAP measures with the most comparable GAAP measures for the historical periods presented are indicative of the reconciliations that will be prepared upon completion of the periods covered by the non-GAAP guidance.

During the past three years, weaker international currencies relative to the U.S. dollar were the most significant factor reducing our sales. The sales reduction attributable to currency over the three-year period approximated $900. We divested our Venezuela operation in January 2015, which further reduced consolidated sales by approximately $100. Adjusted for currency and divestiture effects, sales in the three preceding years increased slightly. We experienced uneven end user markets, with some being relatively strong and others somewhat weak, and the conditions across the regions of the world differing quite dramatically. New business with customers has largely offset the lower sales attributable to overall weaker end user demand. With the closing of the Brevini transaction on February 1, 2017 we expect full year 2017 sales to be $6,200 to $6,400. The Brevini acquisition is expected to add approximately $400 to 2017 sales. Our net new business backlog will increase sales by about $175, with overall stronger market demand also expected to contribute to higher sales. Partially offsetting these increases are currency headwinds from further weakening of international currencies against the U.S. dollar that are expected to reduce 2017 sales by $150 to $200.

Over the past three years, adjusted EBITDA margin as a percent of sales has remained relatively constant at around 11% despite certain markets being weak and volatile. Where practicable, we have aligned our cost with weaker demand levels in certain markets. We continue to focus on margin improvement through right sizing and rationalizing our manufacturing operations, implementing other cost reduction initiatives and ensuring that customer programs are competitively priced. Further margin improvement beyond 2017 is anticipated as we expect to see increased end user demand in certain markets, along with continued benefit from additional new business and cost reduction actions.

We have generated positive free cash flow the past three years while increasing capital spending to support organic business growth through launching new business with customers. Free cash flow in 2014 benefited from the receipt of $40 of interest from the sale of an in-kind note receivable. Lower pension contributions, restructuring payments and cash taxes also benefited free cash flow in 2014, while increased new program launches resulted in higher capital spending. The lower free cash flow in 2015 was primarily due to lower earnings and increased capital spend to support new program launches, with lower cash taxes and restructuring payments providing a partial offset. Reduced free cash flow in 2016 is primarily attributable to our continued success in being awarded significant new customer programs. Although many of the recent program wins are not scheduled to begin production until 2018, these programs required capital investment beginning in 2016. As such, cash used for capital investment in 2016 was $62 higher than in 2015. An elevated level of capital investment will continue into 2017, with capital spending expected to approximate $350 to $370. Our 2017 outlook anticipates that the higher level of earnings will largely offset the increased level of capital spend, resulting in 2017 free cash flow that is relatively comparable to this past year. The higher level of capital spend in recent years associated with increased new program launches is expected to dissipate after 2017.

Among our Operational and Strategic Initiatives are increased focus on and investment in product technology – delivering products and technology that are key to bringing solutions to issues of paramount importance to our customers. Our success on this front is measured, in part, by our sales backlog which is net new business received that will be launching in the future and adding to our base annual sales. This backlog excludes replacement business and represents incremental sales associated with new programs for which we have received formal customer awards. At December 31, 2016, our sales backlog of net new business for the 2017 through 2019 period was $750. This current backlog is comparable to our three-year sales backlog at the end of 2015, with new business wins that added sales approximating $150 being offset by reductions to the backlog to reflect the effects of weaker international currencies relative to the U.S. dollar and reduced demand levels now expected during the three-year period.

Consolidated Results of Operations

Summary Consolidated Results of Operations (2016 versus 2015)

	2016		2015		
	Dollars	% of Net Sales	Dollars	% of Net Sales	Increase/ (Decrease)
Net sales	$5,826		$6,060		$ (234)
Cost of sales	4,982	85.5%	5,211	86.0%	(229)
Gross margin	844	14.5%	849	14.0%	(5)
Selling, general and administrative expenses	406	7.0 %	391	6.5 %	15
Amortization of intangibles	8		14		(6)
Restructuring charges, net	36		15		21
Loss on sale of subsidiaries	(80)				(80)
Impairment of long-lived assets			(36)		36
Other income, net	18		1		17
Income before interest and income taxes	332		394		(62)
Loss on extinguishment of debt	(17)		(2)		(15)
Interest income	13		13		—
Interest expense	113		113		—
Income from continuing operations before income taxes	215		292		(77)
Income tax expense (benefit)	(424)		82		(506)
Equity in earnings (losses) of affiliates	14		(34)		48
Income from continuing operations	653		176		477
Income from discontinued operations			4		(4)
Net income	653		180		473
Less: Noncontrolling interests net income	13		21		(8)
Net income attributable to the parent company	$640		$159		$ 481

Sales — The following table shows changes in our sales by geographic region.

				Amount of Change Due To		
	2016	2015	Increase/ (Decrease)	Currency Effects	Acquisitions (Divestitures)	Organic Change
North America	$3,128	$3,210	$ (82)	$(24)	$ 7	$ (65)
Europe	1,616	1,723	(107)	(44)		(63)
South America	338	377	(39)	(82)		43
Asia Pacific	744	750	(6)	(23)	(3)	20
Total	$5,826	$6,060	$ (234)	$(173)	$ 4	$ (65)

Sales in 2016 were $234 lower than in 2015. Weaker international currencies decreased sales by $173. The acquisition of Magnum earlier this year added sales of $7, with the divestiture of Nippon Reinz at the end of November 2016 reducing sales by $3. A volume-related organic sales decrease of $75 resulted primarily from weaker global Off-Highway demand, lower commercial vehicle production in North America and Brazil and lower sales with a major North America commercial vehicle customer, partially offset by stronger overall light vehicle volume levels in North America, Europe and Asia Pacific and contributions from new customer programs. Cost recovery pricing actions increased sales by $10.

The North America organic sales reduction of 2% was driven principally by a decline in Class 8 production of about 30%, reduced sales levels with a major commercial vehicle customer and weaker Off-Highway demand. These effects were partially offset by growth in full frame light truck production of around 7%, an increase in light vehicle engine build of 4% and higher sales from new customer programs.

Excluding currency effects, principally from a weaker South African rand and British pound, our 2016 sales in Europe were 4% lower than in 2015. Weaker Off-Highway demand was the primary driver of this reduction in sales, with increased light vehicle engine and light truck production providing a partial offset.

South America sales in 2016 were impacted by weaker currencies in Argentina and Brazil. Excluding these effects, sales were up 11% from 2015. The organic sales increase in the region was driven largely by pricing actions, primarily recovery of inflationary cost increases in Argentina and contributions from new customer programs. These increases were partially offset by medium/heavy truck production levels being around 20% lower.

Asia Pacific sales in 2016 were relatively comparable to those in the preceding year. Weaker currencies in Thailand, India and China contributed to the currency-related sales reduction. The 3% organic sales increase resulted primarily from increased production levels in the region along with new customer programs.

Cost of sales and gross margin — Cost of sales declined $229, or 4%, in 2016 when compared to 2015. Similar to the factors affecting sales, the reduction was primarily due to currency effects and lower overall sales volumes. Cost of sales as a percent of 2016 sales was 50 basis points lower than in the previous year. Underabsorption of costs as a result of lower sales volumes increased cost of sales as a percent of sales. Cost of sales in 2016 was also higher due to increases in engineering and product development costs of $13 and material commodity prices of $8 and incremental start-up/launch costs of $8. More than offsetting the margin impact of these increases were savings from lower material costs of $67 and avoidance of supplier transition costs in our Commercial Vehicle segment of $14 in 2015, and a decline in environmental remediation expense of $6.

Gross margin of $844 for 2016 decreased $5 from 2015. Gross margin as a percent of sales was 14.5% in 2016, 50 basis points higher than in 2015. Margin improvement was driven principally by the cost of sales factors referenced above.

Selling, general and administrative expenses (SG&A) — SG&A expenses in 2016 were $406 (7.0% of sales) as compared to $391 (6.5% of sales) in 2015. Salary and benefits expenses in 2016 were $9 higher than in 2015, while selling and other discretionary spending increased $6, due in part to execution of certain strategic project initiatives.

Amortization of intangibles — The reduction of $6 in amortization of intangibles was primarily attributable to certain customer related intangibles becoming fully amortized.

Restructuring charges — Restructuring charges of $36 in 2016 included a fourth-quarter expense of $10 in conjunction with the SIFCO acquisition to eliminate certain positions in our Brazil Commercial Vehicle business to align with expected market demand. Third-quarter 2016 expense included $14 for separation costs in connection with headcount reduction actions in our Off-Highway segment that are being implemented as a result of continuing weak demand levels in this business. The remaining $12 of restructuring expense this year relates to the closure of our Commercial Vehicle manufacturing facility in Glasgow, Kentucky, headcount reduction actions at our corporate facilities in the U.S., other headcount reductions in Brazil and employee separation and exit costs associated with previously announced headcount reduction and facility closure actions. Restructuring charges of $15 in 2015 were primarily attributable to headcount reductions in our Commercial Vehicle business in Brazil which were significantly impacted by lower demand levels, along with costs associated with previously announced restructuring actions.

Loss on sale of subsidiaries — Reference is made to Note 3 of the consolidated financial statements in Item 8 of Part II for a discussion of the fourth-quarter 2016 divestitures of DCLLC and Nippon Reinz.

Impairment of long-lived assets — Reference is made to Note 3 of the consolidated financial statements in Item 8 of Part II for a discussion of charges recognized in the third quarter of 2015 in connection with an impairment of long-lived assets attributable to an exclusive supply relationship with a South American supplier.

Other income, net — The following table shows the major components of Other income, net.

	2016	2015

Government grants and incentives	$8	$ 3
Foreign exchange gain (loss)	(3)	(20)
Gain on derecognition of noncontrolling interest		5
Strategic transaction expenses	(13)	(4)
Insurance and other recoveries	10	4
Gain on sale of marketable securities	7	1
Amounts attributable to previously divested/closed operations		1
Other, net	9	11
Other income, net	$18	$ 1

During 2015, foreign exchange losses were primarily driven by the impact the strengthening U.S. dollar had on our Mexican peso and euro forward contracts. Upon completion of the divestiture of our operations in Venezuela in January 2015, we recognized a $5 gain on the derecognition of the noncontrolling interest in one of our former Venezuelan subsidiaries. See Note 3 to our consolidated financial statements in Item 8 of Part II for additional information. The increase in strategic transaction expenses in 2016 is primarily attributable to an increased level of inorganic growth opportunities that were being pursued, including the SIFCO acquisition that closed in December 2016 and the Brevini acquisition that closed in February 2017. Additionally, we incurred transactional costs in connection with the divestitures of DCLLC and Nippon Reinz. See Notes 2 and 3 for additional information. During 2016, we received a recovery of $8 of costs previously incurred on behalf of other participants in a consortium that existed to administer certain legacy personal injury claims. During 2015, we reached a settlement with an insurance carrier for the recovery of previously incurred legal costs.

Loss on extinguishment of debt — During the second quarter of 2016, we redeemed our February 2021 Notes and incurred a redemption premium of $12. We also restructured our domestic revolving credit facility. In connection with these actions, we wrote off $5 of previously deferred financing costs. The prior year expense was attributable to the call premium and write-off of previously deferred financing costs associated with the redemption of $15 of our February 2019 Notes in the first quarter of 2015.

Interest income and interest expense — Interest income was $13 in both 2016 and 2015. Interest expense was $113 in both 2016 and 2015. A lower average interest rate on borrowings was offset by higher average debt levels in 2016. As discussed in Note 13 to our consolidated financial statements in Item 8 of Part II, Dana Financing Luxembourg S.à r.l. issued $375 of its June 2026 Notes on May 27, 2016 and we redeemed $350 of our February 2021 Notes on June 23, 2016. In conjunction with the issuance of the June 2026 Notes, we entered into two 10-year fixed-to-fixed cross-currency swaps which have the effect of economically converting the June 2026 Notes to euro-denominated debt at a fixed rate of 5.140%. Average effective interest rates, inclusive of amortization of debt issuance costs, approximated 6.5% and 6.6% in 2016 and 2015.

Income tax expense — Income taxes were a benefit of $424 in 2016, whereas we had a tax expense of $82 in 2015. In the fourth quarter of 2016, we determined that most of the valuation allowances against U.S. deferred taxes were no longer required. Release of these valuation allowances resulted in a $501 income tax benefit. Additionally, developments in Brazil led to our determination that an allowance against certain deferred taxes in that country was appropriate, and we recognized tax expense of $25 to establish this valuation allowance. During 2015, we completed an intercompany transfer of an affiliate's stock and certain operating assets. In connection with this transaction, we released $66 of valuation allowance on U.S. deferred tax assets and recognized $23 of tax expense related to the stock sale and $2 of amortization of a prepaid tax asset created as part of the transaction. Amortization of the prepaid tax asset in 2016 was $11. In 2015, we also established a valuation allowance of $15 against the deferred tax assets of a subsidiary in Brazil. See Note 17 to our consolidated financial statements in Item 8 of Part II for further disclosures around these valuation allowance adjustments.

The effective income tax rates vary from the U.S. federal statutory rate of 35% primarily due to valuation allowances in several countries, nondeductible expenses, different statutory rates outside the U.S. and withholding taxes. Contributing to the lower effective rate in 2016 were benefits of $58 for a reduction of accrued taxes on earnings of foreign operations resulting from legal entity restructuring and a revised determination as to permanent reinvestment. Partially offsetting this benefit was tax expense of $17 on dividends and other income attributable to foreign operations, and $30 of expense recognized to establish provisions associated with uncertain tax positions. Excluding the effects of the items described above, the effective tax rate was 24% in 2016 and 37% in 2015. In 2016, jurisdictions with effective tax rates less than the U.S. tax rate of 35% decreased the overall effective rate. In 2015, jurisdictions with valuation allowances had lower pre-tax income, which increased the effective rate.

In the U.S. and certain other countries, where our history of operating losses did not allow us to satisfy the “more likely than not” criterion for recognition of deferred tax assets, we have generally recognized no income tax on the pre-tax income or losses in these jurisdictions as valuation allowance adjustments offset the associated tax effects. With the release of valuation allowances on our U.S. deferred tax assets in 2016, the future impact of valuation allowance adjustments will be less significant, resulting in tax expense that will be more reflective of a customary global effective tax rate.

Equity in earnings of affiliates — Net earnings from equity investments was $14 in 2016 and a net loss of $34 in 2015. Equity in earnings from Bendix Spicer Foundation Brake, LLC (BSFB) were $7 in 2016 and $11 in 2015. Our share of Dongfeng Dana Axle Co., Ltd. (DDAC) operating results were $7 in 2016 and a loss of $7 in 2015. During the fourth quarter of 2015, we determined that we had an other-than-temporary decrease in the carrying value of our DDAC investment and recorded a $39 impairment charge. See Note 20 to our consolidated financial statements in Item 8.

Noncontrolling interests net income — As more fully discussed in Note 1 to our consolidated financial statements in Item 8 of Part II, the first quarter of 2015 included $9 for correction of previously reported noncontrolling interests net income.

Segment Results of Operations (2016 versus 2015)

Light Vehicle

	Sales	Segment EBITDA	Segment EBITDA Margin
2015	$2,482	$ 262	10.6 %
Volume and mix	235	37	
Performance	31	(4)	
Currency effects	(141)	(16)	
2016	$2,607	$ 279	10.7 %

Light Vehicle sales in 2016 were reduced by currency translation effects, primarily as a result of a weaker Mexico peso, Argentina peso, Thailand baht, South Africa rand and British pound sterling. Sales, exclusive of currency effects, were 11% higher than in 2015. The volume-related increases were driven primarily by stronger production levels. North America full frame light truck production in 2016 was up 7%, while light truck production in Europe and Asia Pacific was stronger by 9% and 12% compared to 2015. Sales in this segment also benefited from new customer programs, including $45 relating to a program previously supported by our Commercial Vehicle segment that moved to Light Vehicle in 2016 when the axle used to support the program was replaced with an axle produced by the Light Vehicle segment. Cost recovery actions, including inflationary cost recovery in Argentina, were the primary drivers of the sales increase categorized as performance.

Light Vehicle segment EBITDA of $279 in 2016 was $17 higher than in the same period of 2015. Higher sales volumes from overall stronger production levels and new business provided a benefit of $37, while weaker international currencies reduced segment EBITDA by $16. The year-over-year performance-related earnings reduction was driven partly by an increase in material commodity costs of $16, higher warranty costs of $7, start-up and launch-related costs of $10, an increase in engineering and product development expense, net of customer recoveries, of $9 and inflationary and other cost increases of $17. Partially offsetting these factors which reduced segment EBITDA were cost recovery pricing actions of $31 and savings from material cost initiatives of $24.

Commercial Vehicle

	Sales	Segment EBITDA	Segment EBITDA Margin
2015	$1,533	$ 100	6.5 %
Volume and mix	(265)	(52)	
Performance	3	52	
Currency effects	(17)	(4)	
2016	$1,254	$ 96	7.7 %

Currency effects which reduced sales in 2016 were primarily due to a year-over-year weaker Brazil real and Mexico peso. After adjusting for the effects of currency, 2016 sales in our Commercial Vehicle segment decreased 17% compared to 2015. The volume-related reduction was primarily attributable to lower sales in North America where Class 8 production was down about 30%, a program having sales of $45 was transfered to the Light Vehicle segment who began supplying the axle for the program, and our share of sales with a major customer declined. Weaker end market demand in Brazil also contributed to lower sales volumes, with 2016 medium/heavy truck production being down about 20%.

Commercial Vehicle segment EBITDA of $96 was $4 lower than in 2015. Lower sales volumes reduced 2016 segment EBITDA by $52. Largely offsetting the effects of lower volume was improved year-over-year performance-related segment EBITDA of $52, resulting from material cost savings of $15, avoidance of supplier transition costs of $14 incurred in 2015, a decline in warranty expense of $8, pricing actions of $3 and other net cost reductions of $12.

Off-Highway

	Sales	Segment EBITDA	Segment EBITDA Margin
2015	$1,040	$ 147	14.1 %
Volume and mix	(110)	(31)	
Performance	(11)	11	
Currency effects	(10)	2	
2016	$909	$ 129	14.2 %

Currency-adjusted 2016 sales were down 12% compared to 2015, primarily from lower global end-market demand.

Off-Highway segment EBITDA of $129 in 2016 was down $18 from 2015. The impact of lower sales volumes on segment EBITDA was partially offset by performance-related earnings improvement, principally from year-over-year material cost savings of $17 and other net cost reductions of $5 which were partially offset by pricing actions of $11.

Power Technologies

	Sales	Segment EBITDA	Segment EBITDA Margin
2015	$1,005	$ 149	14.8 %
Volume and mix	69	17	
Performance	(13)	(6)	
Currency effects	(5)	(2)	
2016	$1,056	$ 158	15.0 %

Power Technologies primarily serves the light vehicle market but also sells product to the medium/heavy truck and off-highway markets. Net of currency effects, sales in 2016 increased about 5% due to stronger market demand. Light vehicle engine build in North America and Europe was up about 4% and 3% compared to 2015. Pricing actions during 2016 reduced year-over-year sales by $13.

Segment EBITDA of $158 in 2016 was $9 higher than in 2015, driven primarily by higher sales volumes. Although performance-related segment EBITDA in 2016 benefited by $17 from lower material commodity costs and other material cost savings, those benefits were more than offset by $13 of pricing actions, higher engineering and development expense of $4 and other net cost increases of $6.

Summary Consolidated Results of Operations (2015 versus 2014)

	2015		2014		
	Dollars	% of Net Sales	Dollars	% of Net Sales	Increase/ (Decrease)
Net sales	$6,060		$6,617		$ (557)
Cost of sales	5,211	86.0%	5,672	85.7%	(461)
Gross margin	849	14.0%	945	14.3%	(96)
Selling, general and administrative expenses	391	6.5 %	411	6.2 %	(20)
Amortization of intangibles	14		42		(28)
Restructuring charges, net	15		21		(6)
Impairment of long-lived assets	(36)				(36)
Loss on disposal group held for sale			(80)		80
Pension settlement charges			(42)		42
Other income, net	1		33		(32)
Income before interest and income taxes	394		382		12
Loss on extinguishment of debt	(2)		(19)		17
Interest income	13		15		(2)
Interest expense	113		118		(5)
Income from continuing operations before income taxes	292		260		32
Income tax expense (benefit)	82		(70)		152
Equity in earnings (losses) of affiliates	(34)		13		(47)
Income from continuing operations	176		343		(167)
Income (loss) from discontinued operations	4		(15)		19
Net income	180		328		(148)
Less: Noncontrolling interests net income	21		9		12
Net income attributable to the parent company	$159		$319		$ (160)

Sales — The following table shows changes in our sales by geographic region.

	2015	2014	Increase/ (Decrease)	Amount of Change Due To Currency Effects	Acquisitions (Divestitures)	Organic Change
North America	$3,210	$3,126	$ 84	$(48)	$ —	$ 132
Europe	1,723	1,978	(255)	(313)		58
South America	377	771	(394)	(110)	(107)	(177)
Asia Pacific	750	742	8	(45)		53
Total	$6,060	$6,617	$ (557)	$(516)	$ (107)	$ 66

Sales for 2015 declined $557 or 8% from 2014. Weaker international currencies decreased sales by $516 and the divestiture of our operations in Venezuela reduced sales by $107. The organic sales increase resulted from stronger overall volume levels that added $65 and cost recovery pricing which contributed $1.

Stronger light vehicle and light vehicle engine production levels in North America were largely responsible for the 4% organic sales increase in this region. Full frame light truck production was 8% stronger than last year, while light vehicle engine production levels were about 2% higher. Increased medium/heavy truck production of about 6% and new customer programs coming on line over the past year also contributed to increased year-over-year sales. Partially offsetting this stronger demand and new business was lower sales with a significant Commercial Vehicle segment customer.

Excluding currency effects, principally from a weaker euro and British pound, our sales in Europe were 3% higher than in 2014. Higher sales from increases in light vehicle engine and light truck production of around 5% and 9%, growth in medium/heavy truck production of about 10% and new customer programs were partially offset by weaker off-highway demand levels.

South America sales were reduced by weaker currencies in Brazil, Argentina and Colombia and the divestiture of our operations in Venezuela. Excluding these effects, sales were down 23% from 2014. The organic sales decrease in the region was primarily driven by reductions in medium/heavy truck production levels of about 49%, a decline in light truck production of 17% and weaker off-highway demand. Partially offsetting weaker demand levels in the region were higher sales associated with light vehicle new business, content increases and cost recovery pricing.

Asia Pacific sales in 2015 were up slightly from 2014. The organic sales increase of 7% in the region was driven principally by stronger light vehicle and medium/heavy truck sales volumes in Thailand and India and increased off-highway sales levels in our operation in China.

Cost of sales and gross margin — Cost of sales for 2015 declined $461, or 8%, when compared to 2014. Similar to our reduction in sales, the change was due primarily to currency effects with a partial offset provided by higher sales volumes. Cost of sales as a percent of sales in 2015 was 30 basis points higher than last year. In addition to the benefit of stronger volume levels in some of our markets, savings from material cost reduction initiatives reduced cost by $48, with lower commodity costs contributing an additional $14. These favorable impacts on cost of sales were more than offset by an increase in warranty expense of $11, costs attributed to supply chain disruptions in our Commercial Vehicle segment of $16, an increase in engineering and product development expense of $7, an increase in environmental remediation expense of $8, higher costs in certain markets where we were unable to effectively flex our cost with lower demand levels and other inflationary cost increases.

Gross margin of $849 in 2015 was $96 lower than last year, representing 14.0% of sales in 2015 as compared to 14.3% of sales in 2014. The 30 basis point decrease in gross margin was principally driven by the net effect of the cost factors referenced above, partially offset by a nominal pricing and cost recovery benefit.

Selling, general and administrative expenses (SG&A) — SG&A expenses in 2015 were $391 (6.5% of sales) as compared to $411 (6.2% of sales) in 2014. Salary and benefits expenses in 2015 were $15 lower than in 2014 primarily due to lower anticipated payouts under various annual incentive programs, while selling expense and other discretionary spending declined $5.

Amortization of intangibles — The reduction of $28 in amortization of intangibles is primarily attributable to certain customer related intangibles becoming fully amortized.

Restructuring charges — Restructuring charges of $15 in 2015 included $12 of employee separation costs and $3 of exit costs. The majority of the separation cost was attributable to headcount reductions in our Brazil operations, primarily in our Commercial Vehicle segment, in response to significantly lower demand levels. The exit costs in 2015 were primarily related to activities associated with previously announced facility closure and realignment actions. The restructuring charges of $21 in 2014 primarily represented the impact of headcount reduction initiatives in our Commercial Vehicle and Light Vehicle businesses in South America and Europe, including the closure of our Commercial Vehicle foundry in Argentina and other severance and exit costs associated with previously announced initiatives.

Impairment of long-lived assets — Reference is made to Note 3 of the consolidated financial statements in Item 8 for discussion of charges recognized in connection with an impairment of long-lived assets attributable to an exclusive supply relationship with a South American supplier.

Loss on disposal group held for sale — During the fourth quarter of 2014, we entered into an agreement to sell our operations in Venezuela. We completed the sale in January 2015. The divested business was determined to be held for sale at December 31, 2014, resulting in the recognition of a loss of $80 to reduce the assets and liabilities of this business to their fair value less cost to sell. Reference is made to Divestitures in this Item 7 and to Note 3 of the consolidated financial statements in Item 8 for additional disclosures regarding this transaction.

Pension settlement charges — We completed two actions in the fourth quarter of 2014 that reduced our pension plan obligations. Lump sum payments to deferred vested salaried participants in our U.S. pension plans under a voluntary program resulted in a settlement charge of $36, while completion of a wind-up of certain Canadian pension plans resulted in a charge of $6. See Note 11 of the consolidated financial statements in Item 8 for additional discussion of these two actions.

Other income, net — The following table shows the major components of Other income, net.

	2015	2014
Government grants and incentives	$ 3	$ 4
Foreign exchange gain (loss)	(20)	11
Gain on derecognition of noncontrolling interest	5	
Strategic transaction expenses	(4)	(3)
Insurance and other recoveries	4	2
Gain on sale of marketable securities	1	
Recognition of unrealized gain on payment-in-kind note receivable		2
Amounts attributable to previously divested/closed operations	1	
Other, net	11	17
Other income, net	$ 1	$ 33

During 2015, net foreign exchange loss primarily reflects the adverse impact of settlements of certain Mexican peso and euro forward contracts driven by the strengthening of the U.S. dollar. Net foreign exchange gain in 2014 resulted in large part from favorable currency movement on an intercompany loan that was fully paid in the first half of 2014. As described in Notes 1 and 18 to the consolidated financial statements in Item 8, devaluation of the Venezuelan bolivar, net of transactional gains, resulted in a net foreign currency gain of $2 in 2014. Upon completion of the divestiture of our operations in Venezuela in January 2015, we recognized a $5 gain on the derecognition of the noncontrolling interest in one of our former Venezuelan subsidiaries. See Notes 3 and 18 to our consolidated financial statements in Item 8 for additional information. The January 2014 sale of a payment-in-kind note resulted in the recognition of $2 of unrealized gain that arose following the valuation of the note below its callable value at emergence from bankruptcy. During 2015, we reached a $3 settlement with an insurance carrier for the recovery of previously incurred legal costs, while 2014 included a payment of $2 from the liquidation proceedings of an insolvent insurer carrier. Additionally, as part of correcting overstatements of our pension obligations and goodwill in 2014, we credited Other income, net for $6 to effectively reverse a portion of the write-off of goodwill assigned to our former Driveshaft segment in 2008. See Note 1 to our consolidated financial statements in Item 8 for additional information.

Loss on extinguishment of debt — Actions to refinance a portion of our long-term debt that commenced in the fourth quarter of 2014 were completed in the first quarter of 2015, with expense recognized for the call premium incurred and write-off of unamortized financing costs associated with debt extinguished in this year's first quarter.

Interest income and interest expense — Interest income was $13 and $15 in 2015 and 2014. Interest expense was $113 and $118 in 2015 and 2014. The impact of higher average debt levels was more than offset by a lower average effective interest rate on borrowings. As discussed in Note 13 to our consolidated financial statements in Item 8, we completed the sale of $425 of 5.5% senior unsecured notes in December 2014, utilizing the proceeds to redeem $400 of 6.5% senior unsecured notes. Average effective interest rates, inclusive of amortization of debt issuance costs, approximated 6.6% and 6.9% in 2015 and 2014.

Income tax expense (benefit) — Income tax expense of our continuing operations was $82 in 2015 and a benefit of $70 in 2014. The effective income tax rates vary from the U.S. federal statutory rate of 35% primarily due to valuation allowances in several countries, nondeductible expenses, different statutory rates outside the U.S. and withholding taxes. During 2015, we completed an intercompany transfer of an affiliate's stock and certain operating assets, as discussed in Note 17 of the consolidated financial statements in Item 8. In conjunction with this transaction, we released $66 of valuation allowance on U.S. deferred tax assets and recognized $23 of tax expense related to the stock sale and $2 of amortization of a prepaid tax asset created as a part of the transaction. We also established a valuation allowance of $15 against the deferred tax assets of a South American subsidiary. During 2014, we released valuation allowance of $179 related to the intercompany transaction discussed above that was partially offset by a valuation allowance adjustment related to the $80 charge recorded in connection with the divestiture of our Venezuelan operations. Excluding these items, the effective tax rate was 37% in 2015 as compared to 33% in 2014. The main driver of the increase is related to the jurisdictional mix of the earnings of our non-U.S. operations.

In the U.S. and certain other countries, our recent history of operating losses does not allow us to satisfy the “more likely than not” criterion for recognition of deferred tax assets. Therefore, there is generally no income tax recognized on the pre-tax income or losses in these jurisdictions as valuation allowance adjustments offset the associated tax effects. See Note 17 to our consolidated financial statements in Item 8 for a discussion of the factors considered in our evaluation of the valuation allowances against our U.S. deferred tax assets.

Equity in earnings (losses) of affiliates — Equity investments provided a net loss of $34 in 2015 and earnings of $13 in 2014. Our equity in earnings from BSFB were $11 in 2015 and $10 in 2014. Our share of DDAC's operating results were a loss of $7 in 2015 and earnings of $5 in 2014. During the fourth quarter of 2015, we determined that we had an other-than-temporary decrease in the carrying value of our DDAC investment and recorded a $39 impairment charge. See Note 20 to our consolidated financial statements in Item 8.

Income (loss) from discontinued operations — Income (loss) from discontinued operations activity relates to our Structural Products business. See Note 3 to our consolidated financial statements in Item 8.

Noncontrolling interests net income — As more fully discussed in Note 1 to our consolidated financial statements in Item 8, the first quarter of 2015 included $9 for correction of previously reported noncontrolling interests net income.

Segment Results of Operations (2015 versus 2014)

Light Vehicle

	Sales	Segment EBITDA	Segment EBITDA Margin
2014	$2,496	$ 250	10.0 %
Volume and mix	200	34	
Performance	(12)		
Venezuelan divestiture	(107)		
Currency effects	(95)	(22)	
2015	$2,482	$ 262	10.6 %

Light Vehicle sales in 2015 were reduced by currency translation effects, primarily as a result of a weaker British pound sterling, Brazil real, Argentina peso, Thailand baht and South African rand, and the divestiture of our Venezuela operations in January 2015. Sales, exclusive of currency and divestiture effects, were 8% higher in 2015 than in 2014. The volume related increases were driven in part by stronger production levels. North America full frame light truck production in 2015 was up 8% from the same period of 2014, and light truck production in Europe and Asia Pacific was stronger by 9% and 8%. Light Vehicle volume increases in 2015 also benefited from new customer programs that came on line over the past couple years.

Light Vehicle segment EBITDA of $262 in 2015 is $12 higher than 2014 as the benefit of stronger sales volumes was partially offset by currency effect. In addition to reductions resulting from translation of international results at weaker exchange rates relative to the U.S. dollar, we experienced increased year-over-year transactional currency losses of $10 on non-functional currency denominated activities and intercompany balances. Performance-related segment EBITDA was neutral, with $33 from material cost savings and lower commodity costs being offset by $12 due to lower pricing, a $4 increase in warranty costs, a $2 increase in program launch costs, an additional $2 of engineering and product development expense, net of customer reimbursement, and other items.

Commercial Vehicle

	Sales	Segment EBITDA	Segment EBITDA Margin
2014	$1,838	$ 172	9.4 %
Volume and mix - Brazil	(166)	(35)	
Volume and mix - All other	(19)	(9)	

Performance	24	(11)	
Currency effects	(144)	(17)	
2015	$1,533	$ 100	6.5 %

The currency related reduction in sales was primarily due to a weaker euro, Brazil real and Mexico peso. After adjusting for the effects of currency, 2015 sales in our Commercial Vehicle segment decreased 9% compared to 2014. Weaker end market demand in Brazil where year-over-year medium/heavy truck production was down 44% reduced sales by $166. The remaining volume reduction is primarily attributable to lower sales of about $100 from lost market share with a major customer due to

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residual effects of the supply chain inefficiencies that impacted our performance in the first half of 2015. Partially offsetting this was higher sales from stronger production levels in North America where year-over-year medium/heavy truck production was up about 6%. Pricing recoveries provided a partial offset to the currency and volume impacts on 2015 sales.

Commercial Vehicle segment EBITDA of $100 was $72 lower than in 2014. Weaker Brazil market demand contributed $35, with an additional $9 resulting from net lower sales elsewhere, principally in North America as a result of the above-mentioned market share reduction with a major customer. Year-over-year performance-related segment EBITDA includes a benefit of $25 for increased pricing/recoveries and material cost savings and lower commodity costs of $5. These benefits were more than offset by increased warranty expense of $16, higher supplier transition costs of $8 and other cost increases.

Off-Highway

	Sales	Segment EBITDA	Segment EBITDA Margin
2014	$1,231	$ 169	13.7 %
Volume and mix	(25)	(10)	
Performance	(1)	14	
Currency effects	(165)	(26)	
2015	$1,040	$ 147	14.1 %

Reduced year-over-year sales due to currency effects resulted principally from a weaker euro. Currency-adjusted sales for 2015 were down slightly from 2014. New business gains in this business are largely offsetting the impact of continued weakness in global end-market demand.

Off-Highway segment EBITDA of $147 in 2015 was down $22 from 2014. Currency effects are the primary driver of the reduced EBITDA, reflecting a weaker euro and other international currencies. The performance-related segment EBITDA improvement is primarily attributable to material cost savings of $18 and lower warranty expense of $3 which is partially offset by increases in other costs.

Power Technologies

	Sales	Segment EBITDA	Segment EBITDA Margin
2014	$1,052	$ 154	14.6 %
Volume and mix	75	15	
Performance	(10)	2	
Currency effects	(112)	(22)	
2015	$1,005	$ 149	14.8 %

Power Technologies primarily serves the light vehicle market but also sells product to the medium/heavy truck and off-highway markets. A weaker euro and Canadian dollar were the primary drivers of the reduced sales due to currency. Net of currency effects, sales in 2015 increased about 6% compared to 2014, principally from stronger market demand. Increases in year-over-year light vehicle engine build of 2% in North America and 5% in Europe were the primary drivers of the volume increase.

Segment EBITDA of $149 in 2015 was $5 lower than 2014, due principally to currency effects. The performance-related improvement in 2015 segment EBITDA was primarily driven by lower warranty expense of $7 and higher material cost savings of $6, partially offset by pricing actions which reduced segment earnings by $10.

Non-GAAP Financial Measures

Adjusted EBITDA

We have defined adjusted EBITDA as net income before interest, taxes, depreciation, amortization, equity grant expense, restructuring expense and other adjustments not related to our core operations (gain/loss on debt extinguishment, pension settlements, divestitures, impairment, etc.). Adjusted EBITDA is a measure of our ability to maintain and continue to invest in our operations and provide shareholder returns. We use adjusted EBITDA in assessing the effectiveness of our business strategies, evaluating and pricing potential acquisitions and as a factor in making incentive compensation decisions. In addition to its use by management, we also believe adjusted EBITDA is a measure widely used by securities analysts, investors and others to evaluate financial performance of our company relative to other Tier 1 automotive suppliers. Adjusted EBITDA should not be considered a substitute for income before income taxes, net income or other results reported in accordance with GAAP. Adjusted EBITDA may not be comparable to similarly titled measures reported by other companies.

The following table provides a reconciliation of net income to adjusted EBITDA.

	2016	2015	2014
Net income	$653	$180	$328
Income (loss) from discontinued operations		4	(15)
Income from continuing operations	653	176	343
Equity in earnings (losses) of affiliates	14	(34)	13
Income tax expense (benefit)	(424)	82	(70)
Income from continuing operations before income taxes	215	292	260
Depreciation and amortization	182	174	213
Restructuring	36	15	21
Interest expense, net	100	100	103
Other*	127	71	149
Adjusted EBITDA	$660	$652	$746

* Other includes stock compensation expense, strategic transaction expenses, gain on derecognition of noncontrolling interest, distressed supplier costs, amounts attributable to previously divested/closed operations, loss on extinguishment of debt, loss on sale of subsidiaries and other items. See Note 19 to our consolidated financial statements in Item 8 of Part II for additional details.

Free Cash Flow

We have defined free cash flow as cash provided by operating activities less purchases of property, plant and equipment. We believe this measure is useful to investors in evaluating the operational cash flow of the company inclusive of the spending required to maintain the operations. Free cash flow is neither intended to represent nor be an alternative to the measure of net cash provided by operating activities reported under GAAP. Free cash flow may not be comparable to similarly titled measures reported by other companies.

The following table reconciles net cash flows provided by operating activities to free cash flow.

	2016	2015	2014
Net cash provided by operating activities	$384	$406	$510
Purchases of property, plant and equipment	(322)	(260)	(234)
Free cash flow	$62	$146	$276

Liquidity

The following table provides a reconciliation of our liquidity, a non-GAAP measure, to cash and cash equivalents at December 31, 2016:

Cash and cash equivalents	$707
Less: Deposits supporting obligations	(6)
Available cash	701
Additional cash availability from revolving facility	478
Marketable securities	30
Total liquidity	$1,209

Cash deposits are maintained to provide credit enhancement for certain agreements and are reported as part of cash and cash equivalents. For most of these deposits, the cash may be withdrawn if comparable security is provided in the form of letters of credit. Accordingly, these deposits are not considered to be restricted.

Marketable securities are included as a component of global liquidity as these investments can be readily liquidated at our discretion.

The components of our December 31, 2016 consolidated cash balance were as follows:

	U.S.	Non-U.S.	Total
Cash and cash equivalents	$150	$ 480	$630
Cash and cash equivalents held as deposits		6	6
Cash and cash equivalents held at less than wholly-owned subsidiaries	3	68	71
Consolidated cash balance	$153	$ 554	$707

On February 1, 2017, we used €167 of cash to acquire an 80% ownership interest in BFP and BPT from Brevini. We intend to refinance debt assumed in the transaction during the first quarter of 2017.

A portion of the non-U.S. cash and cash equivalents is utilized for working capital and other operating purposes. Several countries have local regulatory requirements that significantly restrict the ability of our operations to repatriate this cash. Beyond these restrictions, there are practical limitations on repatriation of cash from certain subsidiaries because of the resulting tax withholdings and subsidiary by-law restrictions which could limit our ability to access cash and other assets.

The principal sources of liquidity available for our future cash requirements are expected to be (i) cash flows from operations, (ii) cash and cash equivalents on hand and (iii) borrowings from our revolving facility. We believe that our overall liquidity and operating cash flow will be sufficient to meet our anticipated cash requirements for capital expenditures, working capital, debt obligations, common stock repurchases and other commitments during the next twelve months. While uncertainty surrounding the current economic environment could adversely impact our business, based on our current financial position, we believe it is unlikely that any such effects would preclude us from maintaining sufficient liquidity.

In May 2016, Dana Financing Luxembourg S.à r.l. completed the issuance of $375 of its June 2026 Notes. Net proceeds of the offering after transaction costs totaled $368, of which $362 was used to redeem all of our February 2021 Notes at a price of 103.375%.

On June 9, 2016, we entered into a new $500 revolving credit facility (the "Revolving Facility") which matures on June 9, 2021. The Revolving Facility refinanced and replaced our previous revolving credit facility. At December 31, 2016, we had no borrowings under the revolving facility but we had utilized $22 for letters of credit. We had availability at December 31, 2016 under the Revolving Facility of $478 after deducting the outstanding letters of credit.

At December 31, 2016, we were in compliance with the covenants of our financing agreements. Under the Revolving Facility and our senior notes, we are required to comply with certain incurrence-based covenants customary for facilities of these types. The incurrence-based covenants in the Revolving Facility permit us to, among other things, (i) issue foreign subsidiary indebtedness, (ii) incur general secured indebtedness subject to a pro forma first lien net leverage ratio not to exceed 1.50:1.00 in the case of first lien debt and a pro forma secured net leverage ratio of 2.50:1.00 in the case of other secured debt and (iii) incur additional unsecured debt subject to a pro forma total net leverage ratio not to exceed 3.50:1.00. We may also make dividend payments in respect of our common stock as well as certain investments and acquisitions subject to a pro forma total net leverage ratio of 2.75:1.00. In addition, the Revolving Facility is subject to a financial covenant requiring us to maintain a first lien net leverage ratio not to exceed 2.00:1.00. The indentures governing the senior notes include other incurrence-based covenants that may subject us to additional specified limitations.

Our Board of Directors approved an expansion of our existing common stock share repurchase program from $1,400 to $1,700 on January 11, 2016. During the first half of 2016, we paid $81 to acquire 6,612,537 shares of common stock in the open market. We did not repurchase any shares during the second half of 2016.

From time to time, depending upon market, pricing and other conditions, as well as our cash balances and liquidity, we may seek to acquire our senior notes or other indebtedness or our common stock through open market purchases, privately negotiated transactions, tender offers, exchange offers or otherwise, upon such terms and at such prices as we may determine (or as may be provided for in the indentures governing the notes), for cash, securities or other consideration. There can be no assurance that we will pursue any such transactions in the future, as the pursuit of any alternative will depend upon numerous factors such as market conditions, our financial performance and the limitations applicable to such transactions under our financing and governance documents.

Cash Flow

	2016	2015	2014
Cash used for changes in working capital	$(51)	$(41)	$(39)
Other cash provided by operations	435	447	549
Net cash provided by operating activities	384	406	510
Net cash used in investing activities	(365)	(258)	(246)
Net cash used in financing activities	(88)	(403)	(254)
Net increase (decrease) in cash and cash equivalents	$(69)	$(255)	$10

The table above summarizes our consolidated statement of cash flows. In January 2014, we sold a payment-in-kind note receivable to a third party for $75. The proceeds included $35 of principal and $40 of interest related to prior years. The principal portion of the payment has been classified as cash provided by investing activities and the interest portion has been classified as cash provided by operating activities.

Operating activities — Exclusive of working capital, other cash provided by operations was $435 during 2016 compared to $447 during 2015 and $549 during 2014. The decrease during 2016 was primarily attributable to a year-over-year increase in cash paid for interest of $15 and cash paid on the settlement of foreign currency forward contracts and swaps of $7, partially offset by higher operating earnings. The decrease during 2015 was primarily attributable to lower operating earnings and the $40 of cash received in 2014 on our payment-in-kind note receivable that was attributable to interest, partially offset by year-over-year reductions in cash income taxes of $26, cash paid for interest of $26 and restructuring payments of $10.

Working capital used cash of $51 and $41 in 2016 and 2015. Cash of $86 was used to finance increased receivables in 2016. Cash of $13 and $28 was used to fund higher inventory levels in 2016 and 2015. Increases in accounts payable and other net liabilities provided cash of $48 in 2016 while decreases in accounts payable and other net liabilities used cash of $13 in 2015. Increased working capital levels at the end of 2016 were due in part to November and December sales in 2016 being higher than in 2015. The significant increase in capital project activity during the fourth quarter of 2016, in support of new business awarded by our customers, contributed to increased levels of accounts payable and other liabilities.

Working capital used cash of $41 and $39 in 2015 and 2014. Cash of $32 was used to finance increased receivables in 2014. Cash of $28 and $56 was used to fund higher inventory levels in 2015 and 2014. Decreases in accounts payable and other net liabilities used cash of $13 in 2015 while increases in accounts payable and other net liabilities provided cash of $49 in 2014.

Investing activities — Expenditures for property plant and equipment were $322, $260 and $234 in 2016, 2015 and 2014. During 2016, we paid $18 to acquire the aftermarket distribution business of Magnum and $60 to acquire the strategic assets of SIFCO's commercial vehicle steer axle systems and related forged components businesses. During 2016, we received net proceeds of $5 and $29 related to the sale of our Nippon Reinz and DCLLC subsidiaries. During 2016 and 2015, purchases of marketable securities were funded by proceeds from sales and maturities of marketable securities. As discussed above, we received proceeds in 2014 from the sale of a payment-in-kind note receivable which included $35 of principal. During 2014, net purchases of marketable securities were primarily funded by cash receipts related to the sale of our payment-in-kind notes receivable. Also during 2014, we received $9 that was released from escrow related to the 2010 sale of our former Structural Products business.

Financing activities — During 2016, Dana Financing Luxembourg S.à r.l. completed the issuance of $375 of its June 2026 Notes and paid financing costs of $7 related to the notes. We paid financing costs of $3 to enter our Revolving Facility and a premium of $12 to redeem all of our February 2021 Notes. Also during 2016, we made scheduled repayments of $32 and took out $66 of additional long-term debt at international locations. During 2015, we redeemed $55 of our February 2019 Notes at a $2 premium. During 2014, we completed the sale of $425 in senior unsecured notes and paid financing costs of $7 related to the notes. Also during 2014, we redeemed $345 of our February 2019 Notes at a $15 premium. We used cash of $81, $311 and $260 to repurchase common shares under our share repurchase program in 2016, 2015 and 2014. We used $8 for dividend payments to preferred stockholders in 2014 and used $35, $37 and $32 for dividend payments to common stockholders in 2016, 2015 and 2014. Distributions to noncontrolling interests totaled $17, $9 and $9 in 2016, 2015 and 2014.

Off-Balance Sheet Arrangements

In connection with the divestiture of our Structural Products business in 2010, leases covering three U.S. facilities were assigned to a U.S. affiliate of Metalsa. Under the terms of the sale agreement, we guarantee the affiliate's performance under the leases, which run through June 2025, including approximately $6 of annual payments. In the event of a required payment by Dana as guarantor, we are entitled to pursue full recovery from Metalsa of the amounts paid under the guarantee and to take possession of the leased property.

Contractual Obligations

We are obligated to make future cash payments in fixed amounts under various agreements. The following table summarizes our significant contractual obligations as of December 31, 2016.

	Payments Due by Period				
Contractual Cash Obligations	Total	2017	2018 - 2019	2020 - 2021	After 2021
Long-term debt[1]	$1,653	$45	$58	$450	$1,100
Interest payments[2]	673	97	181	180	215
Leases[3]	214	38	63	45	68
Unconditional purchase obligations[4]	166	163	1	1	1
Pension contribution[5]	12	12			
Retiree health care benefits[6]	91	4	10	10	67
Uncertain income tax positions[7]					
Total contractual cash obligations	$2,809	$359	$313	$686	$1,451

Notes:

(1) Principal payments on long-term debt and capital lease obligations in place at December 31, 2016.

(2) Interest payments are based on long-term debt and capital leases in place at December 31, 2016 and the interest rates applicable to such obligations.

(3) Operating leases related to real estate, vehicles and other assets.

(4) Unconditional purchase obligations are comprised principally of commitments for procurement of fixed assets and the purchase of raw materials.

(5) This amount represents estimated 2017 minimum required contributions to our global defined benefit pension plans. We have not estimated pension contributions beyond 2017 due to the significant impact that return on plan assets and changes in discount rates might have on such amounts.

(6) This amount represents estimated payments under our non-U.S. retiree health care programs. Obligations under the non-U.S. retiree health care programs are not fixed commitments and will vary depending on various factors, including the level of participant utilization and inflation. Our estimates of the payments to be made in the future consider recent payment trends and certain of our actuarial assumptions.

(7) We are not able to reasonably estimate the timing of payments related to uncertain tax positions because the timing of settlement is uncertain. The above table does not reflect unrecognized tax benefits at December 31, 2016 of $117. See Note 17 to our consolidated financial statements in Item 8 for additional discussion.

At December 31, 2016, we maintained cash balances of $6 on deposit with financial institutions primarily to support property insurance policy deductibles, certain employee retirement obligations and specific government approved environmental remediation efforts.

Contingencies

For a summary of litigation and other contingencies, see Note 15 to our consolidated financial statements in Item 8. We believe that any liabilities beyond the amounts already accrued that may result from these contingencies will not have a material adverse effect on our liquidity, financial condition or results of operations.

Critical Accounting Estimates

The preparation of our consolidated financial statements in accordance with GAAP requires us to use estimates and make judgments and assumptions about future events that affect the reported amounts of assets, liabilities, revenue, expenses and the related disclosures. Considerable judgment is often involved in making these determinations. Critical estimates are those that require the most difficult, subjective or complex judgments in the preparation of the financial statements and the accompanying notes. We evaluate these estimates and judgments on a regular basis. We believe our assumptions and estimates are reasonable and appropriate. However, the use of different assumptions could result in significantly different results and actual results could differ from those estimates. The following discussion of accounting estimates is intended to supplement the Summary of Significant Accounting Policies presented as Note 1 to our consolidated financial statements in Item 8.

Income taxes — Accounting for income taxes is complex, in part because we conduct business globally and therefore file income tax returns in numerous tax jurisdictions. Significant judgment is required in determining the income tax provision, uncertain tax positions, deferred tax assets and liabilities and the valuation allowances recorded against our net deferred tax assets. A valuation allowance is provided when, in our judgment based upon available information, it is more likely than not that a portion of such deferred tax assets will not be realized. To make this assessment, we consider the historical and projected future taxable income or loss by tax jurisdiction. We consider all components of comprehensive income and weight the positive and negative evidence, putting greater reliance on objectively verifiable historical evidence than on projections of future profitability that are dependent on actions that have not taken place as of the assessment date. We also consider changes to historical profitability of actions that occurred through the date of assessment and objectively verifiable effects of material forecasted events that would have a sustained effect on future profitability, as well as the effect on historical profits of nonrecurring events. We also incorporate the changes to historical and prospective income from tax planning strategies expected to be implemented.

Prior to 2016, we carried a valuation allowance against deferred tax assets in the U.S. While our U.S. operations have experienced improved profitability in recent years, our analysis of the income of the U.S. operations, as adjusted for changes in historical results due to developments through 2015, demonstrated historical losses as of December 31, 2015. Additionally, there were considerable uncertainties in the U.S. in certain of our end markets. Therefore, we had not achieved a level of sustained profitability that would, in our judgment, support a release of the valuation allowance prior to 2016.

During the fourth quarter, following the completion of an enterprise wide strategy assessment and our annual one and five year financial plans, the Company assessed the weight of all available positive and negative evidence and determined it was more likely than not that future earnings will be sufficient to realize most of our deferred tax assets in the U.S. Accordingly, we have released most of the U.S. valuation allowance at December 31, 2016, resulting in an income tax benefit of $501. In arriving at the conclusion that we had achieved sustained profitability in the U.S., we considered the following positive evidence: we were in a cumulative three-year historical income position in the U.S., we had income in seven of the eight previous quarters; we successfully launched a replacement business for one of our largest customer programs for Light Vehicle in the U.S. with actual volumes and margins which were consistent with our forecast in the fourth quarter; we stabilized our U.S. Commercial Vehicle business despite lower than expected volumes; and, we secured certain new programs with customers that increased our sales backlog in the U.S.

We have retained a valuation allowance of $137 against deferred tax assets in the U.S. primarily related to state operating loss carryforwards and other credits which do not meet the more likely than not criterion for releasing the valuation allowance.

Our analysis of the operations of a subsidiary in Brazil, adjusted for changes in the historical results due to the effects of developments through the current date and planned future actions, reflects three years of historical cumulative losses and our annual one and five year financial plans forecast continued near term losses. Therefore, we determined it was not more likely than not that future earnings will be sufficient to realize the deferred tax assets. Accordingly, we have recorded a valuation allowance as of December 31, 2016, resulting in income tax expense of $25.

In the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is less than certain. We are regularly under audit by the various applicable tax authorities. Although the outcome of tax audits is always uncertain, we believe that we have appropriate support for the positions taken on our tax returns and that our annual tax provisions include amounts sufficient to pay assessments, if any, which may be proposed by the taxing authorities. Nonetheless, the amounts ultimately paid, if any, upon resolution of the issues raised by the taxing authorities may differ materially from the amounts accrued for each year. See additional discussion of our deferred tax assets and liabilities in Note 17 to our consolidated financial statements in Item 8.

Retiree benefits — Accounting for pension benefits and other postretirement benefits (OPEB) involves estimating the cost of benefits to be provided well into the future and attributing that cost to the time period each employee works. These plan expenses and obligations are dependent on assumptions developed by us in consultation with our outside advisers such as actuaries and other consultants and are generally calculated independently of funding requirements. The assumptions used, including inflation, discount rates, investment returns, life expectancies, turnover rates, retirement rates, future compensation levels and health care cost trend rates, have a significant impact on plan expenses and obligations. These assumptions are regularly reviewed and modified when appropriate based on historical experience, current trends and the future outlook.

Changes in one or more of the underlying assumptions could result in a material impact to our consolidated financial statements in any given period. If actual experience differs from expectations, our financial position and results of operations in future periods could be affected.

Mortality rates are based in part on the company's plan experience and actuarial estimates. The inflation assumption is based on an evaluation of external market indicators, while retirement and turnover rates are based primarily on actual plan experience. Health care cost trend rates are developed based on our actual historical claims experience, the near-term outlook and an assessment of likely long-term trends. For our largest plans, discount rates are based upon the construction of a yield curve which is developed based on a subset of high-quality fixed-income investments (those with yields between the 40th and 90th percentiles). The projected cash flows are matched to this yield curve and a present value developed which is then calibrated to develop a single equivalent discount rate. Pension benefits are funded through deposits with trustees that satisfy, at a minimum, the applicable funding regulations. For our largest defined benefit pension plans, expected investment rates of return are based on input from the plans' investment advisers and actuary regarding our expected investment portfolio mix, historical rates of return on those assets, projected future asset class returns, the impact of active management and long-term market conditions and inflation expectations. We believe that the long-term asset allocation on average will approximate the targeted allocation and we regularly review the actual asset allocation to periodically re-balance the investments to the targeted allocation when appropriate. OPEB and the majority of our non-U.S. pension benefits are funded as they become due.