MODINE MANUFACTURING CO
Form 10-K
May 24, 2018

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

FORM 10-K

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

For the fiscal year ended March 31, 2018

or

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

For the transition period from ____________ to ____________

Commission file number 1-1373

MODINE MANUFACTURING COMPANY
(Exact name of registrant as specified in its charter)

WISCONSIN	39-0482000
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1500 DeKoven Avenue, Racine, Wisconsin	53403
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code (262) 636 1200

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

Title of each class	Name of each exchange on which registered
Common Stock, $0.625 par value	New York Stock Exchange

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

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was

required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes No

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

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

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

Large Accelerated Filer	Accelerated Filer
Non-accelerated Filer (Do not check if a smaller reporting company)	Smaller reporting company
	Emerging growth company

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

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

Approximately 97 percent of the outstanding shares are held by non-affiliates. The aggregate market value of these shares was approximately $941 million based upon the market price of $19.25 per share on September 29, 2017, the last business day of our most recently completed second fiscal quarter. Shares of common stock held by each executive officer and director and by each person known to beneficially own more than 10 percent of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. The determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares outstanding of the registrant's common stock, $0.625 par value, was 50,502,209 at May 18, 2018.

An Exhibit Index appears at pages 81-83 herein.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the following documents are incorporated by reference into the parts of this Form 10 K designated to the right of the document listed.

Incorporated Document	Location in Form 10-K
Proxy Statement for the 2018 Annual Meeting of Shareholders	Part III of Form 10-K (Items 10, 11, 12, 13, 14)

MODINE MANUFACTURING COMPANY
TABLE OF CONTENTS

Table of Contents

(This page intentionally left blank.)

Table of Contents
PART I

ITEM 1. BUSINESS.

Modine Manufacturing Company specializes in providing innovative thermal management solutions to diversified global markets and customers. We are a leading provider of engineered heat transfer systems and high-quality heat transfer components for use in on- and off-highway original equipment manufacturer ("OEM") vehicular applications. In addition, we are a global leader in thermal management technology and solutions for sale into a wide array of commercial, industrial, and building heating, ventilating, air conditioning, and refrigeration ("HVAC&R") markets. Our primary product groups include i) powertrain cooling and engine cooling; ii) coils, coolers, and coatings; and iii) heating, ventilation and air conditioning. Our primary customers across the globe include:

- Automobile, truck, bus, and specialty vehicle OEMs;
- Agricultural, industrial and construction equipment OEMs;
- Commercial and industrial equipment OEMs;
- Heating, ventilation and cooling OEMs;
- Construction architects and contractors; and
- Wholesalers of heating equipment.

We focus our development efforts on solutions that meet the ever-increasing heat transfer needs of OEMs and other customers within the automobile, commercial vehicle, construction, agricultural, industrial and HVAC&R industries. Our products and systems are aimed at solving complex heat transfer challenges requiring effective thermal management. Typical customer and market demands include products and systems that are lighter weight, more compact, more efficient and more durable to meet customer standards as they work to ensure compliance with increasingly stringent global emissions, fuel economy and energy efficiency requirements. Our heritage provides a depth and breadth of expertise in thermal management, which, when combined with our global manufacturing presence, standardized processes, and state-of-the-art technical resources, enables us to rapidly bring highly-valued, customized solutions to our customers.

History

Modine was incorporated under the laws of the State of Wisconsin on June 23, 1916 by its founder, Arthur B. Modine. Mr. Modine's "Turbotube" radiators became standard equipment on the famous Ford Motor Company Model T. When he died at the age of 95, A.B. Modine had personally been granted more than 120 U.S. patents for his heat transfer innovations. The standard of innovation exemplified by A.B. Modine remains the cornerstone of Modine today.

Terms and Year References

When we use the terms "Modine," "we," "us," the "Company," or "our" in this report, unless the context otherwise requires, w are referring to Modine Manufacturing Company. Our fiscal year ends on March 31 and, accordingly, all references to a particular year mean the fiscal year ended March 31 of that year, unless indicated otherwise.

Business Strategy and Results

Modine pursues market leadership by being a customer-focused, global company delivering exceptional quality, innovation and value. We will grow our core business of thermal management with superior technical solutions in systems, products and services – coupled with a cost competitive structure.

During fiscal 2018, we successfully integrated our recently-acquired Luvata Heat Transfer Solutions (“Luvata HTS”) business, which now operates as our Commercial and Industrial Solutions (“CIS”) segment. This acquisition, which was completed in the third quarter of fiscal 2017, was particularly key in achieving our “Diversify” and “Grow” objectives within our Strengthen, Diversify and Grow (“SDG”) strategic transformation initiative launched in fiscal 2016. Through this acquisition, we successfully broadened our customer base, increased our presence in non-vehicular markets, and grew our company with CIS segment net sales of $620 million in fiscal 2018. In addition, we’ve continued strengthening our company through ongoing cost-containment initiatives and the expansion of our low-cost country manufacturing footprint. Looking ahead, we are confident that our SDG strategy will keep us grounded, thriving, and transforming.

Table of Contents

Our top five customers are in three different markets – automotive, commercial vehicle, and off-highway – and our ten largest customers accounted for 48 percent of our fiscal 2018 sales. In fiscal 2018, 61 percent of our total sales were generated from customers outside of the U.S., with 56 percent of these sales generated by foreign operations and 5 percent generated by exports from the U.S. In fiscal 2017, 62 percent of our total sales were generated from customers outside of the U.S., with 55 percent of these sales generated by foreign operations and 7 percent generated by exports from the U.S. In fiscal 2016, 63 percent of our total sales were generated from customers outside of the U.S., with 54 percent of these sales generated by foreign operations and 9 percent generated by exports from the U.S.

During fiscal 2018, our consolidated net sales were $2.10 billion, a 40 percent increase from $1.50 billion in fiscal 2017. This increase was primarily due to $442 million of additional sales from our CIS segment, which we owned for four months of the prior fiscal year, and higher sales in all of our other operating segments. Our operating income of $92 million in fiscal 2018 represents a $50 million improvement compared with the prior year, primarily due to $18 million of additional operating income contributed by our CIS segment and higher earnings in the Americas, Asia and Building HVAC ("BHVAC") segments.

In continued support of our SDG initiatives and in an effort to optimize our cost structure and improve the efficiency of our operations, we have engaged in various restructuring activities. As a result, we recorded $16 million of restructuring expenses during fiscal 2018, primarily related to severance expenses and equipment transfer and plant consolidation activities.

A key metric by which we measure our performance is return on average capital employed ("ROACE"). We define ROACE as operating income, plus restructuring expenses, acquisition-related costs and adjustments, impairment charges, and excluding certain other gains or charges, less income tax at a 30 percent rate and earnings attributable to noncontrolling interest; divided by the average of debt plus Modine shareholders' equity. Our ROACE increased 140 basis points in fiscal 2018 to 8.6 percent compared with 7.2 percent in fiscal 2017. This increase was primarily due to improved earnings, partially offset by an increase in average capital employed.

Table of Contents

ROACE is not a measure derived under generally accepted accounting principles (“GAAP”) and should not be considered as a substitute for any measure derived in accordance with GAAP. We believe that ROACE provides investors with helpful information about our performance, our ability to provide an acceptable return on capital, and our ability to fund future growth. This measure may not be comparable with similar measures presented by other companies. The following schedule provides a reconciliation of ROACE to net earnings, as presented in accordance with GAAP:

(in millions)	Fiscal 2018	Fiscal 2017
Net earnings	$ 23.8	$ 14.9
Restructuring expenses	16.0	10.9
Acquisition-related costs and adjustments	4.3	19.1
Strategy consulting fees	3.7	-
Impairment charges	2.5	-
Environmental and legal charges	1.4	1.9
Gain on sale of facilities	-	(2.0)
Interest expense	25.6	17.2
Other expense (net)	3.3	4.3
Provision for income taxes	39.5	5.9
Subtotal	120.1	72.2
Tax applied at 30% rate	(36.0)	(21.7)
Noncontrolling interest	(1.6)	(0.7)
Net earnings - adjusted	$ 82.5	$ 49.8
Average capital employed (see calculation below)	$ 962.5	$ 696.1
ROACE	8.6 %	7.2 %
Capital employed (debt + Modine shareholders' equity):		
Beginning of fiscal year	$ 924.9	$ 538.8
June 30	980.5	552.4
September 30	988.0	552.9
December 31	949.6	911.6
End of fiscal year	969.5	924.9
Average capital employed (a)	$ 962.5	$ 696.1

(a) Average capital employed represents the sum of capital employed for the five most recent quarter-end dates, divided by five.

Markets

We sell products to multiple end markets. Our Americas, Europe, and Asia segments represent our vehicular businesses and our CIS and BHVAC segments represent our industrial businesses. The following is a summary of our primary end markets, categorized as a percentage of our net sales:

	Fiscal 2018	Fiscal 2017
Our Vehicular Businesses:		
Automotive	25 %	31 %
Commercial vehicle	18 %	25 %
Off-highway	13 %	13 %

Other vehicular	2	%	4	%
<u>Our Industrial Businesses:</u>				
Commercial & residential air conditioning	18	%	9	%
Commercial refrigeration	8	%	4	%
Other HVAC&R (a)	16	%	14	%

(a) Includes North America coils sales in our Americas segment.

Table of Contents

Competitive Position

We compete with many manufacturers of heat transfer and HVAC&R products, some of which are divisions of larger companies. The markets for our products continue to be very dynamic. Our traditional OEM customers are faced with dramatically increased international competition and have expanded their global manufacturing footprints to compete in local markets. In addition, consolidation within the supply base and vertical integration has introduced new or restructured competitors to our markets. Some of these market changes have caused us to experience competition from suppliers in other parts of the world that enjoy economic advantages such as lower labor costs, lower healthcare costs, and lower tax rates. As a result, we have expanded and continue to expand our geographic footprint, in part to provide more flexibility to serve our customers around the globe. Many of our customers also continue to ask us, as well as their other primary suppliers, to provide research and development ("R&D"), design, and validation support for new potential projects. This combined work effort often results in stronger customer relationships and more partnership opportunities for us.

Business Segments

Prior to and including fiscal 2018, we assigned specific operations to segments based principally upon defined markets and geographic locations. Each operating segment is managed by a vice president and has separate financial results reviewed by our chief operating decision maker. These results are used by management in evaluating the performance of each business segment and in making decisions on the allocation of resources among our various businesses. Effective April 1, 2018, we combined our Americas, Europe, and Asia segment operations with the objective of operating as a more global, product-based organization. As part of this segment combination and our CIS integration activities, we also merged our Americas coils business into the CIS segment and expect to achieve operational improvements and organizational efficiencies as a result. Beginning for fiscal 2019, we will report financial results for the new Vehicular Thermal Solutions segment, which will include the current Americas, Europe and Asia segments. Financial information for our operating segments is included in Note 20 of the Notes to Consolidated Financial Statements.

Our Vehicular Businesses

Americas, Europe, and Asia Segments

The continued globalization of our vehicular customer base requires us to manage our strategic approach, product offerings and the competitive environment on a global basis. This trend offers significant opportunities for us with our market positioning, including our presence in key vehicular markets (U.S., Mexico, Brazil, Europe, India, China, South Korea, and Japan) and a global organization with the expertise to solve technical challenges. We are recognized for having strong technical support in all regions, an extensive product portfolio, and the ability to provide global standard designs for our customers. Many vehicular OEMs continue to expect cost reductions from suppliers while requiring a consistent level of quality. In addition, these OEMs seek new technology solutions at low prices for their thermal management needs. In general, this creates challenges for us and the entire supply base, but also provides an opportunity for suppliers, like Modine, who develop innovative solutions at a competitive cost.

Each of our main vehicular competitors, AKG Group, BorgWarner, Dana Corporation, Denso Corporation, Mahle, Tata Toyo, TitanX, T. Rad Co. Ltd., UFI Filters, Valeo SA, Hanon Systems, and Zhejiang Yinlun Machinery Co. Ltd., have a multi-regional or worldwide presence. Increasingly, we face heightened competition as these competitors expand their product offerings and manufacturing footprints through expansion into lower-cost countries or lower-cost sourcing initiatives. In addition, competitors from some lower-cost regions are beginning to expand into new geographical markets.

The Americas, Europe, and Asia segments represent our vehicular businesses and serve the automotive, commercial vehicle, and off-highway markets. The following summarizes the primary markets served by our vehicular segments:

Automotive

Market Overview – The automotive market declined slightly during fiscal 2018. We expect moderate growth in fiscal 2019. This growth is supported longer term by changes in global fuel efficiency standards, in-vehicle technology enhancements and growth in emerging markets. We are seeing increased activity in the automotive market on alternative powertrains, such as electric, hybrid, and fuel cell. Global automotive OEMs and their powertrain suppliers are engaged in significant development activities for these alternative powertrains. In addition, a number of start-up companies specializing in electric vehicles are working towards establishing themselves in the marketplace which creates new business dynamics and opportunities. We are actively involved in developing and manufacturing solutions for these alternative powertrains. At the same time, we remain focused on programs for traditional internal combustion engines which will remain as the primary automotive powertrain for years to come. We expect our global automotive production to increase in fiscal 2019, particularly driven by market improvements and maturing program volumes in China and new program launches in our Americas, Europe, and Asia segments.

Table of Contents

Products – Powertrain cooling (engine cooling assemblies, radiators, condensers and charge air coolers); auxiliary cooling (power steering coolers and transmission oil coolers); component assemblies; radiators for special applications; on-engine cooling (exhaust gas recirculation (“EGR”) coolers, engine oil coolers, fuel coolers, charge air coolers and intake air coolers); chillers and cooling plates for battery thermal management.

Customers – Automobile, light truck, motorcycle, and power sports vehicle and engine manufacturers.

Primary Competitors – Mahle Behr; Dana Corporation; UFI Filters; Denso Corporation; Hanon Systems; BorgWarner; Valeo SA; and Zhejiang Yinlun Machinery Co., Ltd.

Commercial Vehicle

Market Overview – During fiscal 2018, the North America commercial vehicle market experienced substantial growth, particularly within the heavy-duty trucks market. In fiscal 2019, we expect this market trend to continue with strong growth for heavy-duty trucks and modest growth for medium-duty trucks. In South America, the commercial vehicle market recovered in fiscal 2018 and we expect this market to remain strong during fiscal 2019. In Europe, the commercial vehicle market experienced moderate growth in fiscal 2018 and we expect this market to remain at similar levels during fiscal 2019. We expect strong growth in the commercial vehicle market in India during fiscal 2019.

Other trends influencing the commercial and specialty vehicle markets include a desire by global commercial vehicle manufacturers to standardize U.S., Canadian, and Eurozone emissions regulations and the adoption of higher standards, more comparable to Euro6, in China and India. Global standardization would likely lead to further development activities for Modine. Additionally, truck and bus manufacturers are evaluating alternative powertrains and fuels, including electrification, waste heat recovery, and other technologies aimed to improve vehicle efficiency, all of which could present opportunities for us. These trends are driving the advancement of product development worldwide and are creating demand for incremental improvements to thermal transfer products. We remain active in this development activity, and believe we are well positioned to support these changes.

Products – Powertrain cooling (engine cooling modules, radiators, charge air coolers, condensers, oil coolers, fan shrouds, and surge tanks); on-engine cooling (EGR coolers, engine oil coolers, fuel coolers, charge air coolers and intake air coolers); and auxiliary cooling (transmission and retarder oil coolers and power steering coolers); battery thermal management systems.

Customers – Commercial, medium- and heavy-duty truck and engine manufacturers; and bus and specialty vehicle manufacturers.

Primary Competitors – Mahle Behr; TitanX; T. Rad Co. Ltd.; BorgWarner; and Tata Toyo.

Off-Highway

Market Overview – The global off-highway markets experienced strong recovery during fiscal 2018. We expect this trend to continue during fiscal 2019. Production of U.S. agriculture, construction, and mining machinery increased significantly in fiscal 2018, compared to the prior year. We expect this market will continue to improve during fiscal 2019. The European construction and agricultural equipment markets were relatively flat in fiscal 2018; however, we expect moderate growth in these markets during fiscal 2019. In South America, the off-highway markets had a solid recovery in fiscal 2018 and we expect this improvement to continue in fiscal 2019. In Asia, the construction market experienced significant growth during fiscal 2018, and we expect further growth in the China and Korea excavator markets in fiscal 2019.

Table of Contents

Products – Powertrain cooling (engine cooling modules, radiators, condensers, charge air coolers, fuel coolers and oil coolers); auxiliary cooling (power steering coolers and transmission oil coolers); and on-engine cooling (EGR coolers, engine oil coolers, fuel coolers, charge air coolers and intake air coolers).

Customers – Construction, agricultural, and mining equipment and engine manufacturers, and industrial manufacturers of material handling equipment, generator sets and compressors.

Primary Competitors – Adams Thermal Systems Inc.; AKG Group; Denso Corporation; Zhejiang Yinlun Machinery Co., Ltd.; ThermaSys Corp.; Doowon; Donghwan; T. Rad Co. Ltd.; Mahle Industrial Thermal Systems; KALE OTO RADYATÖR; and RAAL.

Our Industrial Businesses

Commercial and Industrial Solutions Segment

Market Overview – The primary HVAC&R markets served by our CIS segment experienced modest growth during fiscal 2018 and we expect continued growth during fiscal 2019. We anticipate growth in the global commercial and residential air conditioning markets driven by an expansion of reliable energy sources and increases in income levels in China, India, and other developing countries. Demand for efficient HVAC&R systems is driven by more stringent energy efficiency regulations and the need for higher-efficiency buildings. Also in regards to the commercial air conditioning markets, we expect growth in the global precision air conditioning market driven by increasing heat density in data centers resulting from rising levels of data traffic and storage requirements, coupled with the overall expansion of the underlying data center market. In addition, regulatory bodies are imposing stricter guidelines aimed to reduce carbon footprint, which is driving data centers to adopt the latest precision cooling solutions. We expect growth in the global refrigeration markets, and in particular, in China and India. We also expect increasing urbanization, changing food consumption trends and increasing global trade will drive investments in refrigeration infrastructure. The global industrial power sector is characterized by the continuing demand for electricity as a preferred source of energy, climate change initiatives to minimize environmental impacts, growth and industrialization in emerging markets, and grid upgrades and refurbishments in more mature markets.

Products – Coils (heat-exchanger and microchannel); coolers (unit coolers, remote condensers, fluid coolers, transformer oil coolers and brine coolers); and coatings to protect against corrosion.

Customers – Commercial and industrial equipment manufacturers; distributors, contractors, and consumers in a variety of commercial and industrial applications, including commercial and mobile air conditioning, refrigeration, and precision and industrial cooling.

Primary Competitors – Kelvion Holding GmbH; Alfa-Laval AB; LU-VE S.p.A; Lennox International, Inc.; Super Radiator Coils; DunAn Precision Manufacturing, Inc.; and Guntner GmbH & Co. KG.

Building HVAC Segment

Market Overview –The North America heating market expanded in fiscal 2018 due to overall positive economic conditions, but was also supported by the increased length of the winter season in our key geographic markets. We are planning for modest improvement in the North America heating market in fiscal 2019. We also anticipate increased market demand for ventilation products in fiscal 2019 as we expand our product offering in this market. In addition to North America, we also serve heating, ventilating, and air conditioning (“HVAC”) markets in the United Kingdom, mainland Europe, the Middle East and South Africa. We expect improvement in commercial investment, construction market activity, and energy efficiency legislation to drive increased demand for our ventilation and air conditioning products. We anticipate that recent European legislation, designed to increase equipment efficiency and reduce the use of high global warming potential refrigerants, will result in customer buying pattern shifts over the next two years, and may increase market volatility in the short-term as HVAC equipment providers shift products towards more efficient and environmentally-friendly alternatives.

Products – Unit heaters (gas-fired, hydronic, electric and oil-fired); duct furnaces (indoor and outdoor); infrared units (high- and low-intensity); hydronic products (commercial fin-tube radiation, cabinet unit heaters, and convectors); roof-mounted direct- and indirect-fired makeup air units; commercial packaged rooftop ventilation units; unit ventilators; single packaged vertical units; precision air conditioning units for data center applications; air-handling units; chillers; ceiling cassettes; hybrid fan coils; and condensing units. Aftersales includes spare parts, maintenance service and control solutions from existing plant equipment and new building management controls and systems.

Table of Contents

Customers – Mechanical contractors; HVAC wholesalers; installers; and end users in a variety of commercial and industrial applications, including banking and finance, data center management, education, hospitality, telecommunications, entertainment arenas, hotels, restaurants, hospitals, warehousing, manufacturing, and food and beverage processing.

Primary Competitors – Lennox International Inc.; Commercial Environmental Solutions (Reznor); Mestek Inc. (Sterling); Vertiv (formerly Emerson Electric Company (Liebert)); Stulz; Schneider Electric (APC / Uniflair); Johnson Controls, Inc. (York); Daikin (McQuay International); System Air (ChangeAir); Ingersoll Rand Inc. (Trane); Bard Manufacturing; and Aaon, Inc.

Geographical Areas

We maintain administrative organizations in all key geographical regions to facilitate customer support, development and testing, and other administrative functions. We operate in the following countries:

North America	South America	Europe	Asia/Pacific	Middle East/Africa
United States	Brazil	Austria	China	United Arab Emirates
Mexico		Belgium	India	South Africa
		Germany	Japan	
		Hungary	South Korea	
		Italy		
		Netherlands		
		Russia		
		Serbia		
		Spain		
		Sweden		
		United Kingdom		

Our non-U.S. subsidiaries and affiliates manufacture and sell a number of vehicular and commercial, industrial and building HVAC&R products similar to those produced in the U.S. In addition to normal business risks, operations outside the U.S. are subject to other risks such as changing political, economic and social environments, changing governmental laws, taxes and regulations, foreign currency volatility, and market fluctuations.

Exports

Export sales from the U.S. to foreign countries as a percentage of consolidated net sales were 5 percent, 7 percent and 9 percent in fiscal 2018, 2017 and 2016, respectively.

We believe our international presence positions us to share profitably in the anticipated long-term growth of the global vehicular and commercial, industrial and building HVAC&R markets. We are committed to increasing our involvement and investment in international markets in the years ahead.

Foreign and Domestic Operations

Financial information relating to our foreign and domestic operations is included in Note 20 of the Notes to Consolidated Financial Statements.

Customer Dependence

Our ten largest customers, certain of which are conglomerates, accounted for 48 percent of our consolidated net sales in fiscal 2018. In fiscal 2018, 2017 and 2016, Daimler AG and Volkswagen AG each accounted for 10 percent or more of our sales.

Table of Contents

Our top customers operate primarily in the automotive, commercial vehicle, off-highway, and commercial air conditioning markets. Our top customers, listed alphabetically, include: Carrier, Caterpillar; Daimler AG (including Daimler Trucks, Detroit Diesel, Mercedes-Benz, and Western Star Trucks); Deere & Company; Denso Corporation; FCA Italy S.p.A. (including Chrysler, CNH, Fiat, Iveco, and VM Motori); Navistar (including MWM International); Volkswagen AG (including Audi, MAN, Porsche, and Scania); and AB Volvo (including Mack Trucks and Renault Trucks). In addition, our CIS segment includes significant sales generated from a single global technology customer (9 percent of CIS segment sales) with which we are party to confidentiality agreements. Generally, we supply products to our customers on the basis of individual purchase orders received from them. When it is in the mutual interest of Modine and our customers, we utilize long-term sales agreements to minimize investment risks and provide the customer with a proven source of competitively-priced products. These contracts are typically three to five years in duration.

Backlog of Orders

Our operating segments maintain their own inventories and production schedules. We believe that our current production capacity is capable of handling the sales volume expected in fiscal 2019 and beyond.

Raw Materials

We purchase aluminum, nickel and steel from several domestic and foreign suppliers. In general, we do not rely on any one supplier for these materials, which are, for the most part, available from numerous sources in quantities required by us. The supply of copper and brass material is highly concentrated between two global suppliers. We normally do not experience raw material shortages and believe that our suppliers' production of these metals will be adequate throughout the next fiscal year. We typically adjust metals pricing with our raw material and major fabricated component suppliers on a quarterly basis. When possible, we have made material pass-through arrangements with key customers, which allow us to adjust customer prices, on a prospective basis, based upon increases and decreases in the cost of key raw materials. When utilized, however, these pass-through arrangements are typically limited to the underlying cost of the material based upon the London Metal Exchange, and do not include related premiums or fabrication costs. In addition, there can often be a three-month to one-year lag between the time of the material price increase or decrease and the time that we adjust the price with our customer.

Patents

We own or license numerous patents related to our products and operations. These patents and licenses have been obtained over a period of years and expire at various times. Because we have many product lines, we believe that our business as a whole is not materially dependent upon any particular patent or license, or any particular group of patents or licenses. We consider each of our patents, trademarks and licenses to be of value and aggressively defend our rights throughout the world against infringement. We have been granted and/or acquired more than 2,400 patents worldwide over the life of our company.

Research and Development

We remain committed to our vision of creating value through technology and innovation. We focus our engineering and R&D efforts on solutions that meet challenging heat transfer needs of OEMs and other customers within the automotive, powersports, commercial vehicle, construction, agricultural, and commercial, industrial, and building HVAC&R markets. Our products and systems are often aimed at solving difficult and complex heat transfer challenges requiring advanced thermal management. Typical market demands are for products and systems that are lighter weight, more compact, more efficient and more durable to meet customer standards as customers work to ensure compliance with increasingly stringent global emissions and energy efficiency requirements. Our heritage includes a depth and breadth of expertise in thermal management that, combined with our global manufacturing presence, standardized processes, and state-of-the-art technical resources, enables us to rapidly bring customized solutions to our customers.

R&D expenditures, including certain application engineering costs for specific customer solutions, totaled $66 million, $64 million, and $61 million in fiscal 2018, 2017, and 2016, respectively. Over the last three years, R&D expenditures have been between 3 and 5 percent of our consolidated net sales. This level of investment reflects our continued commitment to R&D in an ever-changing marketplace. To achieve efficiencies and lower development costs, our R&D groups work closely with our customers on special projects and system designs. Projects include EGR technology, oil coolers, charge air coolers, refrigerant heat exchangers, and battery thermal management systems for the automotive, commercial vehicle, agriculture, construction, and residential and commercial energy storage markets, which enable our customers to meet more stringent emission and energy efficiency standards. Most of our current R&D activities are focused on internal development in the areas of powertrain cooling, engine cooling, building HVAC, and commercial and industrial thermal management products. We also collaborate with several industry, university, and government-sponsored research organizations that conduct research and provide data on practical applications in the markets we serve. We continue to identify, evaluate and engage in external research projects that complement our strategic internal research initiatives in order to further leverage our significant thermal technology expertise and capabilities.

Table of Contents
Quality Improvement

Through our global Quality Management System ("QMS"), which is an integrated part of our management system, the majority of our manufacturing facilities and administrative offices in our Americas, Europe and Asia segments are registered to ISO 9001:2008 or ISO/TS 16949:2009 standards, helping to ensure that our customers receive high quality products and services. We have begun to transition to ISO 9001:2015 and IATF 16949:2016 standards. While customer expectations for performance, quality and service continue to rise, our QMS has allowed us to drive improvements in quality performance and has enabled the ongoing delivery of products, service and value that meet or exceed customer expectations.

Our global QMS operates within the context of the Modine Operating System ("MOS"), which focuses on well-defined improvement principles and leadership behaviors to engage our teams in facilitating rapid improvements. We drive sustainable and systematic continuous improvement throughout all operating segments and functional areas of the organization by utilizing the principles, processes and behaviors that are core to these systems.

Environmental, Health and Safety Matters

We are committed to preventing pollution, eliminating waste and reducing environmental risks and we have established specific environmental improvement targets and objectives for the upcoming fiscal year. The majority of our facilities maintain Environmental Management System ("EMS") certification to the international ISO14001 standard through independent third-party audits.

During fiscal 2018, we launched a global initiative to reduce both our energy and water usage by 5 percent by fiscal 2020. In support of this initiative, we recently implemented building improvements, including LED lighting, at our recently-acquired Grenada, Mississippi manufacturing facility. These improvements alone are expected to reduce approximately 2.6 million kilowatt hours of electrical usage per year.

Our product portfolio reflects our sense of environmental responsibility. We continue to develop and refine environmentally-friendly product lines, including oil, fuel, and EGR coolers for gas and diesel applications, light-weight and high-performance powertrain cooling heat exchangers for both combustion and electric vehicle, air cooled refrigerant and liquid heat exchangers used in residential, commercial, and industrial applications, and our advanced cooling system technology. These products provide increased fuel economies, enable combustion technologies that reduce harmful gas emissions for vehicles, and provide energy efficient solutions for building and stationary applications. Our BHVAC segment offerings, including the Effinity™, a condensing gas-fired unit heater with industry-leading efficiencies; the Atherion™ Commercial Packaged Ventilation System; the Airedale SchoolMate® with a water source heat pump; and the Airedale Chiller product line-up, ecodesign compliant with European standards. These products are helping commercial, industrial and residential users achieve high energy efficiencies and reduce utility costs.

Obligations for remedial activities may arise at our facilities due to past practices, or as a result of a property purchase or sale. These expenditures most often relate to sites where past operations followed practices that were considered acceptable under then-existing regulations, but now require investigative and/or remedial work to ensure appropriate environmental protection or where we are a successor to the obligations of prior owners and current laws and regulations require investigative and/or remedial work to ensure sufficient environmental compliance. Environmental liabilities for investigative work and remediation at sites in the U.S. and abroad totaled $17 million at March 31, 2018.

We have consistently out-performed the private-industry Recordable Incident Rate ("RIR" as defined by OSHA) average for the manufacturing sector, which was 3.6 in 2016. During fiscal 2018, we recorded an RIR of 1.42, which was slightly higher than our prior year rate of 1.31. The increase in fiscal 2018 largely resulted from the full-year inclusion of the recently-acquired CIS segment manufacturing locations. Throughout fiscal 2018, we implemented our behavior-based safety program at certain CIS locations in North America, Europe and Asia and expect to implement the program at the remaining CIS locations during fiscal 2019. Our behavior-based safety program proactively seeks to correct at-risk behaviors while positively reinforcing safe behaviors. Our focus on behavior-based safety and process stream safety are part of our long-term commitment to strengthen our safety culture.

9

Table of Contents

Employees

We employed approximately 11,700 persons worldwide as of March 31, 2018.

Seasonal Nature of Business

Our overall operating performance is generally not subject to a significant degree of seasonality, as sales to OEM customers are dependent upon market demand for new vehicles. However, our second fiscal quarter production schedules are typically impacted by customer summer shut downs and our third fiscal quarter is affected by holiday schedules. Additionally, our CIS and BHVAC segments experience some seasonality as demand for HVAC&R products can be affected by heating and cooling seasons, weather patterns, construction, and other factors. We expect sales volume within our CIS segment to be higher during our first two fiscal quarters due to the construction seasons in the northern hemisphere. Sales volume within the BHVAC segment is generally stronger in our second and third fiscal quarters, corresponding with demand for heating products.

Working Capital

We manufacture products for the majority of customers in our vehicular and CIS segments on an as-ordered basis, which makes large inventories of finished products unnecessary. In our BHVAC segment, we maintain varying levels of finished goods inventory due to seasonal demand and certain sales programs. In Brazil, within our Americas segment, we maintain aftermarket product inventory in order to timely meet customer needs in the Brazilian automotive and commercial vehicle aftermarkets. We do not experience a significant number of returned products within any of our operating segments.

Available Information

Through our website, www.modine.com (Investors link), we make available, free of charge, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, other Securities Exchange Act reports and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). Our reports are also available free of charge on the SEC's website, www.sec.gov. Also available free of charge on our website are the following corporate governance documents, among others:

- Code of Conduct, which is applicable to all Modine directors and employees, including the principal executive officer, the principal financial officer, and the principal accounting officer;
- Corporate Governance Guidelines;
- Audit Committee Charter;
- Officer Nomination and Compensation Committee Charter;
- Corporate Governance and Nominating Committee Charter; and
- Technology Committee Charter.

All of the reports and corporate governance documents referenced above and other materials relating to corporate governance may also be obtained without charge by contacting Corporate Secretary, Modine Manufacturing Company, 1500 DeKoven Avenue, Racine, Wisconsin 53403-2552. We do not intend to incorporate our internet website and the information contained therein or incorporated therein into this annual report on Form 10-K.

Table of Contents

ITEM 1A. RISK FACTORS.

In the ordinary course of our business, we face various market, operational, strategic, and financial risks. These risks could have an impact on our business, financial condition, and results of operations. Our most significant risks are set forth below and elsewhere in this Annual Report on Form 10-K.

Our Enterprise Risk Management ("ERM") process seeks to identify and address significant risks. We believe that risk-taking is an inherent aspect of operating a global business and, in particular, one focused on growth and cost-competitiveness. Our goal is to proactively manage risks in a structured approach in conjunction with strategic planning, with the intent to preserve and enhance shareowner value. However, the risks set forth below and elsewhere in this report, as well as other risks currently unknown or deemed immaterial at the date of this report, could adversely affect us and cause our financial results to vary materially from recent or anticipated future results.

A. MARKET RISKS

Customer and Supplier Matters

Our vehicular customers continually seek price reductions from us. These price reductions adversely affect our results of operations.

We face continuous price-reduction pressure from our vehicular customers. Virtually all of these OEMs impose aggressive price-reduction initiatives upon their suppliers, even if contrary to contractual terms, and we expect such actions to continue in the future. In response, we must continually reduce our operating costs in order to maintain profit margins that are acceptable to us. We have taken, and will continue to take, steps to reduce our operating costs to offset customer price reductions; however, price reductions adversely affect our profit margins and are expected to do so in the future. If we are unable to avoid price reductions for our customers, or if we are unable to offset price reductions through improved operating efficiencies and manufacturing processes, sourcing alternatives, technology enhancements and other cost reduction initiatives, our results of operations could be adversely affected.

Our net sales and profitability could be adversely affected from business losses or declines with major customers.

Deterioration of a business relationship with a major customer could cause our sales and profitability to suffer. Generally speaking, this risk is highest in our vehicular business segments, where a large portion of sales are attributable to a relatively small number of customers. We principally compete for new vehicular business both during the initial development of new models and upon the redesign of existing models by our major customers. New model development generally begins two to five years prior to marketing such models to the public. The failure to obtain new business on new models or to retain or increase business on redesigned existing models could adversely affect our business and financial results. In addition, as a result of the relatively long lead times required for many of our complex vehicular components, it may be difficult in the short term for us to obtain new sales to replace any unexpected decline in sales of existing products. We may incur significant expense in preparing to meet anticipated customer requirements that may not be recovered. The loss of a major customer, the loss of business with respect to one or more of the vehicle models that use our vehicular products, or a significant decline in the production levels of such vehicles could have an adverse effect on our business, results of operations and financial condition.

Our CIS segment includes significant sales generated from a single global technology customer (9 percent of CIS segment sales) with which we are party to confidentiality agreements. Sales to this customer have historically fluctuated significantly from one quarter or fiscal year to the next. While we expect to be able to manage troughs and take advantage of peaks, to the extent we are unable to predict and mitigate lower sales levels or respond in a timely fashion to higher sales levels, the results of operations for the CIS segment could be adversely affected.

We are dependent upon the health of the customers and markets we serve.

We are highly susceptible to unfavorable trends in the markets we serve as our customers' sales and production levels are affected by general economic conditions, including access to credit, the price of fuel and electricity, employment levels and trends, interest rates, labor relations issues, regulatory requirements, trade agreements and other market factors, as well as by customer-specific issues. Any significant decline in production levels for current and future customers could result in asset impairment charges and a reduction in our sales, thereby adversely impacting our results of operations and financial condition.

Table of Contents

Fluctuations in costs of materials (including aluminum, copper, steel and stainless steel (nickel), other raw materials and energy) could place significant pressure on our results of operations.

Increases in the costs of materials, which may be impacted by a variety of factors, including changes in trade laws and tariffs, could have a significant adverse effect on our results of operations. We have sought to alleviate this risk by including material pass-through provisions in our customer contracts when possible. Under these arrangements, we adjust customer prices, on a prospective basis, based upon increases and decreases in the cost of key raw materials. However, where these pass-through arrangements are utilized, there can often be a three-month to one-year lag between the time of the material increase or decrease and the time of the price adjustment. To further mitigate our exposure, we, from time to time, enter into forward contracts to hedge a portion of our forecasted aluminum and copper purchases. However, these hedges may only partially offset increases in material costs, and significant increases could have an adverse effect on our results of operations.

We could be adversely affected if we experience shortages of components or materials from our suppliers.

In an effort to manage and reduce our cost of purchased goods and services, we, like many suppliers and customers, have been consolidating our supply base. As a result, we are dependent upon limited sources of supply for certain components used in the manufacture of our products. We select our suppliers based upon total value (including price, delivery and quality), taking into consideration their production capacities, financial condition and ability to meet our demand. In some cases, it can take several months or longer to find a supplier due to qualification requirements. However, strong demand, the potential effects of trade laws and tariffs, capacity limitations, financial instability, or other problems experienced by our suppliers could result in shortages or delays in their supply of product to us. If we were to experience a significant or prolonged shortage of critical components or materials from any of our suppliers and could not procure the components or materials from other sources, we would be unable to meet our production schedules and we would miss product delivery dates, which would adversely affect our sales, results of operations and customer relationships.

Continual customer pressure to absorb costs adversely affects our profitability.

Customers often request that we pay for design, engineering and tooling costs that are incurred prior to the start of production and recover these costs through amortization in the piece price of the product. Some of these costs cannot be capitalized, which adversely affects our profitability until the programs for which they have been incurred are launched. If a given program is not launched, or is launched with significantly lower volumes than planned, we may not be able to recover the design, engineering and tooling costs from our customers, further adversely affecting our results of operations.

Competitive Environment

We face strong competition.

The competitive environment continues to be dynamic as many of our customers, faced with intense international competition, have expanded their sourcing of components. As a result, we experience competition from suppliers in other parts of the world that enjoy economic advantages, such as lower labor costs, lower health care costs, lower tax rates, lower costs associated with legal compliance, and, in some cases, export or raw materials subsidies. In addition, consolidation and vertical integration within the supply base have introduced new or restructured competitors to our markets. Increased competition could adversely affect our business and our results of operations.

Table of Contents

Exposure to Foreign Currencies

As a global company, we are subject to foreign currency rate fluctuations, which affect our financial results.

Although our financial results are reported in U.S. dollars, a significant portion of our sales and operating costs are realized in foreign currencies, including the euro, British pound, Brazilian real and others. Our sales and profitability are affected by movements of the U.S. dollar against foreign currencies in which we generate sales and incur expenses. To the extent that we are unable to match sales in foreign currencies with costs paid in the same currency, exchange rate fluctuations in any such currency could have an adverse effect on our financial results. During times of a strengthening U.S. dollar, our reported sales and earnings from our international operations will be lower because the applicable local currency will be translated into fewer U.S. dollars. In certain instances, currency rate fluctuations may create pricing pressure relative to competitors quoting in different currencies, which could result in our products becoming less competitive. Significant long-term fluctuations in relative currency values, in particular a significant change in the relative values of the U.S. dollar, euro, British pound or Brazilian real, could have an adverse effect on our results of operations and financial condition.

B. OPERATIONAL RISKS

Challenges of Maintaining a Competitive Cost Structure

We may be unable to maintain competitive cost structures within our business.

As a result of the “Strengthen” objective of our SDG transformational strategy, we have transitioned to a more global, product-based organization. We have engaged in restructuring activities in our Americas, Europe, CIS and BHVAC segments in order to optimize our manufacturing footprint and cost structure. These restructuring activities included the consolidation and/or closure of manufacturing facilities in North America and Europe, as well as targeted headcount reductions that support our objective of reducing operational and SG&A cost structures. In addition, we continue to focus on reducing costs for materials and services through targeted adjustments and negotiations with our supply base. Our successful execution of these initiatives, and our ability to identify and execute future opportunities to optimize our cost structures, is critical to enable us to establish a cost environment that will increase and sustain our long-term competitiveness. Any failure to do so could, in turn, adversely affect our results of operations and financial condition.

Challenges of Product Launches

We continue to launch a significant number of new programs at our facilities across the world. The success of these launches is critical to our business.

We design technologically advanced products, and the processes required to produce these products can be difficult and complex. We commit significant time and financial resources to ensure the successful launch of new products and programs. Due to our high level of launch activity in each of our segments, we must appropriately manage these launches and deploy our operational and administrative resources to take advantage of this increase in our business. If we do not successfully launch the products and programs, we may lose market share or damage relationships with our customers, which could negatively affect our business. In addition, any failure in our manufacturing strategy for these new products or programs could result in production inefficiencies or asset impairment charges.

Complexities of Global Presence

We are subject to risks related to our international operations.

We have manufacturing and technical facilities located in North America, South America, Europe, Asia, and Africa. In fiscal 2018, 57 percent of our sales were from non-U.S. operations. Consequently, our global operations are subject to complex international laws and regulations and numerous risks and uncertainties, including changes in monetary and fiscal policies, including those related to tax and trade, cross-border trade restrictions or prohibitions, import or other charges or taxes, fluctuations in foreign currency exchange and interest rates, changing economic conditions, unreliable intellectual property protection and legal systems, insufficient infrastructures, social unrest, political instability and disputes, incompatible business practices, and international terrorism. Changes in policies or laws governing the terms of foreign trade, and in particular increased trade restrictions, tariffs or taxes on imports from countries where we manufacture products, such as Mexico, could have a material adverse effect on our results of operations. In addition, compliance with multiple and often conflicting laws and regulations of various countries is burdensome and expensive.

Embargoes or sanctions imposed by the U.S. government or those abroad that restrict or prohibit sales to or purchases from specific persons or countries or based upon product classification may expose us to potential criminal and civil sanctions. We cannot predict future regulatory requirements to which our business operations may be subject or the manner in which existing laws might be administered or interpreted.

Table of Contents

In addition, the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act and other similar anti-corruption laws generally prohibit companies and their intermediaries from making payments to improperly influence foreign government officials or other persons for the purpose of obtaining or retaining business. In recent years, there has been a substantial increase in the global enforcement of anti-corruption laws. In the event that we believe our employees or agents may have violated applicable anti-corruption laws, or if we are subject to allegations of any such violations, we may have to expend significant time and financial resources towards the investigation and remediation of the matter, which could disrupt our business and result in a material adverse effect on our financial condition, results of operations and reputation.

Reliance upon Technology Advantage

If we cannot differentiate ourselves from our competitors with our technology, our existing and potential customers may seek lower prices and our sales and earnings may be adversely affected.

Price, quality, delivery, technological innovation, and application engineering development are the primary elements of competition in our markets. If we fail to keep pace with technological changes and cannot differentiate ourselves from our competitors with our technology or fail to provide high quality, innovative products and services that both meet or exceed customer expectations and address their ever-evolving needs, we may experience price erosion, lower sales, and lower profit margins. Significant technological developments by our competitors or others also could adversely affect our business and results of operations.

Developments or assertions by or against us relating to intellectual property rights could adversely affect our business.

We own significant intellectual property, including a large number of patents, trademarks, copyrights and trade secrets. Our intellectual property plays an important role in maintaining our competitive position in a number of the markets we serve. As we expand our operations in jurisdictions where the enforcement of intellectual property rights is less robust, the risk of others duplicating our proprietary technologies increases, despite our efforts to protect them. Developments or assertions by or against us relating to intellectual property rights could adversely affect our business and results of operations.

Information Technology Systems

We may be adversely affected by any disruption in, or breach of, our information technology systems.

Our operations are dependent upon our information technology systems, which encompass all of our major business functions. A substantial disruption in our information technology systems for a prolonged time period, or a significant breach of our information security, could result in delays in receiving inventory and supplies or filling customer orders, and/or the release of otherwise confidential information, adversely affecting our customer service and relationships as well as our reputation, and could lead to significant remediation expenses and litigation risks. Our systems, and the systems of our service providers or others, could be breached, damaged or interrupted by cyber attacks or other man-made intentional or unintentional events, or by natural disasters or occurrences, many of which may, despite our best efforts, be beyond our ability to effectively detect, anticipate or control. Any such events and the related delays, problems or costs could have a material adverse effect on our business, financial condition, results of operations and reputation.

Table of Contents

Claims and Litigation

We may incur material losses and costs as a result of warranty and product liability claims and litigation or other legal proceedings.

In the event our products fail to perform as expected, we are exposed to warranty and product liability claims and may be required to participate in a recall or other field campaign of such products. Many of our vehicular customers offer extended warranty protection for their vehicles and put pressure on their supply base to extend warranty coverage as well. If our customers demand higher warranty-related cost recoveries, or if our products fail to perform as expected, it could have a material adverse impact on our results of operations and financial condition. We are also involved in various legal proceedings from time to time incidental to our business. If any such proceeding has a negative result, it could adversely affect our business, results of operations and financial condition.

Environmental, Health and Safety Regulations

We could be adversely impacted by the costs of environmental, health and safety regulations.

Our operations are subject to various federal, state, local and foreign laws and regulations governing, among other things, emissions to air, discharge to waters and the generation, handling, storage, transportation, treatment and disposal of waste and other materials. The operation of our manufacturing facilities entails risks in these areas and there can be no assurance we will avoid material costs or liabilities relating to such matters. Our financial responsibility to clean up contaminated property may extend to previously-owned or used property, properties owned by unrelated companies, as well as properties we currently own and use, regardless of whether the contamination is attributable to prior owners. In addition, potentially significant expenditures could be required in order to comply with evolving environmental, health and safety laws, regulations or other requirements that may be adopted or imposed in the future.

C. STRATEGIC RISKS

Growth Strategies

Inability to identify and execute on inorganic- and organic-growth opportunities may adversely impact our business and operating results.

We expect to continue to pursue acquisitions in "industrial" markets and expand our market share in high-growth engine and powertrain cooling areas through focused research and development activities and commercial pursuits. There can be no assurance we will be able to identify attractive acquisition targets and/or organic growth opportunities. If we are unable to successfully complete such transactions in the future, our growth may be limited. In addition, future acquisitions will require integration of operations, sales and marketing, information technology, finance, and administrative functions. If we are unable to successfully integrate acquisitions and operate these businesses profitably, we may not achieve the financial or operational success expected from the acquisitions.

D. FINANCIAL RISKS

Liquidity and Access to Cash

Our indebtedness may limit our use of cash flow to support operating, development and investment activities, and failure to comply with our debt covenants could adversely affect our liquidity and financial results.

As of March 31, 2018, we had total outstanding indebtedness of $479 million. Our indebtedness and related debt service obligations i) require that significant cash flow from operations be used for principal and interest payments, which reduces the funds we have available for other business purposes; ii) limit our flexibility in planning for or reacting to changes in our business and market conditions; and iii) expose us to interest rate risk, since the majority of our debt obligations carry variable interest rates. If we are unable to maintain our leverage ratio (net debt divided by Adjusted EBITDA, as defined in our credit agreements) within our target range of 1.5 to 2.5, or if we are unable to move cash globally to enable debt repayments in a tax-efficient manner, our results of operations and financial condition could be adversely affected.

Market trends and regulatory requirements may require additional funding for our pension plans.

We have several defined benefit pension plans in the U.S., all of which are frozen to new participants. Our funding policy for these plans is to contribute annually, at a minimum, the amount necessary on an actuarial basis to provide for benefits in accordance with applicable laws and regulations. Our domestic plans have an unfunded liability of $73 million. During fiscal 2019, we anticipate making funding contributions totaling $6 million related to these domestic plans. Funding requirements for our defined benefit plans are dependent upon, among other things, interest rates, underlying asset returns, mortality rate tables, and the impact of legislative or regulatory changes. Should changes in actuarial assumptions or other factors result in the requirement of significant additional funding contributions, our financial condition could be adversely affected.

Table of Contents

Goodwill and Intangible Assets

Our balance sheet includes significant amounts of goodwill and intangible assets. An impairment of a significant portion of these assets would adversely affect our financial results.

Our balance sheet includes goodwill and intangible assets totaling $304 million at March 31, 2018. We perform goodwill impairment tests annually, as of March 31, or more frequently if appropriate. In addition, we review intangible assets for impairment whenever business conditions or other events indicate that the assets may be impaired. If we determine the carrying value of an asset is impaired, we write down the asset to fair value and record an impairment charge to current operations. An impairment of a significant portion of goodwill or intangible assets could have a material adverse effect on our financial results.

Income Taxes

We may be subject to additional income tax expense or become subject to additional tax exposure.

Unfavorable changes in the financial outlook of our operations in certain jurisdictions could lead to adverse changes in our valuation allowance assertions for our deferred tax assets. Additionally, the subjectivity of or changes in tax laws and regulations in jurisdictions where we have significant operations could materially affect our results of operations. On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act includes broad and complex changes to the U.S. tax code, including, but not limited to (i) a reduction in the U.S. federal corporate tax rate from 35 percent to 21 percent effective January 1, 2018, and (ii) a transition tax on certain unrepatriated earnings of foreign subsidiaries. In addition, we are subject to tax audits in each jurisdiction in which we operate. Unfavorable or unexpected outcomes from one or more tax audits could adversely affect our results of operations and financial condition.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

Table of Contents

ITEM 2. PROPERTIES.

We operate manufacturing facilities in the U.S. and multiple foreign countries. Our world headquarters, including general offices and laboratory, experimental and tooling facilities, is located in Racine, Wisconsin. We have additional technical support functions located in Grenada, Mississippi; Guadalajara, Spain; Bonlanden, Germany; Söderköping, Sweden; Pocenia, Italy; Sao Paulo, Brazil; Leeds, United Kingdom; Changzhou, China; and Chennai, India.

The following table sets forth information regarding our principal properties as of March 31, 2018. Properties with less than 20,000 square feet of building space have been omitted from this table.

Location of Facility	Building Space	Primary Use	Owned or Leased
Americas Segment			
Lawrenceburg, TN	554,000 sq. ft.	Manufacturing	144,000 Owned; 410,000 Leased
Nuevo Laredo, Mexico	466,000 sq. ft.	Manufacturing	399,000 Owned; 67,000 Leased
Sao Paulo, Brazil	343,000 sq. ft.	Manufacturing	Owned
Jefferson City, MO	220,000 sq. ft.	Manufacturing	162,000 Owned; 58,000 Leased
Trenton, MO	160,000 sq. ft.	Manufacturing	Owned
Joplin, MO	140,000 sq. ft.	Manufacturing	Owned
Laredo, TX	92,000 sq. ft.	Warehouse	Leased
Europe Segment			
Bonlanden, Germany	205,000 sq. ft.	Administrative & technology center	Owned
Kottingbrunn, Austria	221,000 sq. ft.	Manufacturing	Owned
Pontevico, Italy	167,000 sq. ft.	Manufacturing	Owned
Mezökövesd, Hungary	246,000 sq. ft.	Manufacturing	Owned
Pliezhausen, Germany	126,000 sq. ft.	Manufacturing	48,000 Owned; 78,000 Leased
Kirchentellinsfurt, Germany	108,000 sq. ft.	Manufacturing (closed)	Owned
Uden, Netherlands	107,000 sq. ft.	Manufacturing	74,000 Owned; 33,000 Leased
Neuenkirchen, Germany	76,000 sq. ft.	Manufacturing	Owned
Gyöngyös, Hungary	58,000 sq. ft.	Manufacturing	Leased
Asia Segment			
Chennai, India	118,000 sq. ft.	Manufacturing	Owned
Yangzhou, China	116,000 sq. ft.	Manufacturing (Joint Venture)	Leased
Changzhou, China	108,000 sq. ft.	Manufacturing	Owned
Shanghai, China	80,000 sq. ft.	Manufacturing	Leased
Cheonan, South Korea	46,000 sq. ft.	Manufacturing (Joint Venture)	Leased

Table of Contents

Location of Facility	Building Space	Primary Use	Owned or Leased
Commercial and Industrial Solutions Segment			
Grenada, MS	809,000 sq. ft.	Administrative, manufacturing & technology center	Leased
Grenada, MS	220,000 sq. ft.	Manufacturing	Owned
Grenada, MS	190,000 sq. ft.	Manufacturing	Leased
Jacksonville, TX	55,000 sq. ft.	Manufacturing	Owned
Temecula, CA	33,000 sq. ft.	Manufacturing	Leased
Louisville, KY	28,000 sq. ft.	Manufacturing	Leased
Tampa, FL	23,000 sq. ft.	Manufacturing	Leased
Pocenia, Italy	449,000 sq. ft.	Administrative, manufacturing & technology center	Owned
Amaro, Italy	196,000 sq. ft.	Manufacturing	Leased
San Vito, Italy	131,000 sq. ft.	Manufacturing	Owned
Padova, Italy	78,000 sq. ft.	Manufacturing	Leased
Guadalajara, Spain	482,000 sq. ft.	Manufacturing	Owned
Zhongshan, China	143,000 sq. ft.	Manufacturing	Leased
Wuxi, China	125,000 sq. ft.	Manufacturing	Leased
Juarez, Mexico	204,000 sq. ft.	Manufacturing	Leased
Ramos Arizpe, Mexico	59,000 sq. ft.	Manufacturing	Leased
Söderköping, Sweden	237,000 sq. ft.	Manufacturing	Owned
Kötschach-Mauthen, Austria	195,000 sq. ft.	Manufacturing (closed)	Owned
Sremska Mitrovica, Serbia	91,000 sq. ft.	Manufacturing	Leased
Building HVAC Segment			
Leeds, United Kingdom	247,000 sq. ft.	Administrative & manufacturing	Leased
Consett, United Kingdom	30,000 sq. ft.	Manufacturing	Owned
Consett, United Kingdom	20,000 sq. ft.	Manufacturing	Leased
Buena Vista, VA	197,000 sq. ft.	Manufacturing	Owned
Lexington, VA	104,000 sq. ft.	Warehouse	Owned
West Kingston, RI	93,000 sq. ft.	Manufacturing	Owned
Corporate Headquarters			
Racine, WI	458,000 sq. ft.	Headquarters & technology center	Owned

We consider our plants and equipment to be well maintained and suitable for their purposes. We review our manufacturing capacity periodically and make the determination as to our need to expand or, conversely, rationalize our facilities as necessary to meet changing market conditions and our needs.

ITEM 3. LEGAL PROCEEDINGS.

The information required hereunder is incorporated by reference from Note 18 of the Notes to Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

Table of Contents

EXECUTIVE OFFICERS OF THE REGISTRANT.

The following sets forth the name, age (as of March 31, 2018), recent business experience and certain other information relative to each executive officer of the Company.

Name	Age	Position
Brian J. Agen	49	Vice President, Human Resources (October 2012 – Present).
Dennis P. Appel	43	Vice President, Commercial and Industrial Solutions (December 2016 – Present). Prior to joining Modine, Mr. Appel held a variety of leadership positions with Luvata HTS in the U.S., Europe and Asia, including most recently, President of Luvata HTS.
Scott L. Bowser	53	Vice President, Global Operations (October 2016 – Present); previously Vice President of Asia and Global Procurement for the Company.
Thomas A. Burke	60	President and Chief Executive Officer (April 2008 – Present).
Joel T. Casterton	46	Vice President, Vehicular Thermal Solutions (January 2018 – Present); previously Director – Global Program Management & Quality for the Company.
Michael B. Lucareli	49	Vice President, Finance and Chief Financial Officer (October 2011 – Present).
Thomas F. Marry	57	Executive Vice President and Chief Operating Officer (February 2012 – Present).
Matthew J. McBurney	48	Vice President, Strategic Planning and Development (November 2017 – Present); previously Vice President, Luvata HTS Integration for the Company and Vice President, Building HVAC for the Company.
Scott A. Miller	53	Vice President, Building HVAC (September 2016 – Present); previously Managing Director – Global Operations for the Company and Operations Director of the Building HVAC and North America business units for the Company.
Holger Schwab	53	Vice President, Vehicular Thermal Solutions (April 2017 – March 2018); previously Regional Vice President – Europe for the Company.
Sylvia A. Stein	51	Vice President, General Counsel and Corporate Secretary (January 2018 – Present). Prior to joining Modine, Ms. Stein served as the Associate General Counsel, Marketing & Regulatory at the Kraft Heinz Foods Company and was Chief Counsel, Cheese & Dairy and Grocery Business Units for Kraft Foods Group, Inc. / Kraft Foods Global, Inc.
Scott D. Wollenberg	49	Vice President – Chief Technology Officer (July 2016 – Present); previously Regional Vice President – Americas for the Company.

Executive Officer positions are designated in our Bylaws and the persons holding these positions are elected annually by the Board, generally at its first meeting after the annual meeting of shareholders in July of each year. In addition, the Officer Nomination and Compensation Committee of the Board may recommend and the Board of Directors may approve promotions and other actions with regard to executive officers at any time during the fiscal year.

There are no family relationships among the executive officers and directors. All of the executive officers of Modine have been employed by us in various capacities during the last five years with the exception of Mr. Appel, who joined in December 2016 and Ms. Stein, who joined in January 2018, whose business experience during the last five years is provided above.

There are no arrangements or understandings between any of the executive officers and any other person pursuant to which he or she was elected an officer of Modine.

Table of Contents
PART II

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

Our common stock is listed on the New York Stock Exchange. Our trading symbol is MOD. The table below shows the range of high and low closing sales prices for our common stock for fiscal 2018 and 2017. As of March 31, 2018, shareholders of record numbered 2,468.

	Fiscal 2018		Fiscal 2017	
Quarter	High	Low	High	Low
First	$17.10	$10.30	$11.26	$8.50
Second	19.35	15.45	11.90	8.70
Third	23.65	19.70	16.30	9.30
Fourth	25.10	20.40	15.55	11.00

We did not pay dividends during fiscal 2018 or 2017. Under our debt agreements, we are permitted to pay dividends on our common stock, subject to certain restrictions based upon the calculation of debt covenants, as further described under "Liquidity and Capital Resources" under Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations. We currently do not intend to pay dividends in fiscal 2019.

We did not purchase shares of common stock during the fourth quarter of fiscal 2018.

PERFORMANCE GRAPH

The following graph compares the cumulative five-year total return on our common stock with similar returns on the Russell 2000 Index and the Standard & Poor's (S&P) MidCap 400 Industrials Index. The graph assumes a $100 investment and reinvestment of dividends.

Table of Contents

Company / Index	Initial Investment March 31, 2013	Indexed Returns Years ended March 31, 2014	2015	2016	2017	2018
Modine Manufacturing Company	$ 100	$160.99	$148.02	$120.99	$134.07	$232.42
Russell 2000 Index	100	124.90	135.15	121.96	153.94	172.09
S&P MidCap 400 Industrials Index	100	123.52	131.70	128.32	159.89	186.20

ITEM 6. SELECTED FINANCIAL DATA.

The following data should be read in conjunction with the consolidated financial statements and accompanying notes included elsewhere in this report.

(in millions, except per share amounts)	Years ended March 31, 2018	2017	2016	2015	2014
Net sales	$2,103	$1,503	$1,353	$1,496	$1,478
Operating income	92	42	37	54	40
Net earnings (loss)	24	15	(1)	23	132
Total assets	1,573	1,450	921	931	1,030
Long-term debt - excluding current portion	386	406	126	130	131
Net cash provided by operating activities	124	42	72	64	105
Expenditures for property, plant and equipment	71	64	63	58	53
Net earnings (loss) per share attributable to Modine shareholders:					
Basic	$0.44	$0.29	$(0.03)	$0.46	$2.75
Diluted	0.43	0.29	(0.03)	0.45	2.72

The following factors impact the comparability of the selected financial data presented above:

- On November 30, 2016, we acquired Luvata HTS for total consideration of $388 million, net of cash acquired. Operating as our CIS segment, net sales from this acquired business were $620 million and $178 million during fiscal 2018 and 2017, respectively. This transaction and the related debt financing also resulted in increases in total assets and long-term debt. During fiscal 2018 and 2017, we recorded $4 million and $15 million, respectively, of costs directly related to the acquisition and integration of Luvata HTS. See Note 2 of the Notes to Consolidated Financial Statements for additional information regarding this acquisition.

- During fiscal 2018, 2017, 2016, 2015, and 2014, we incurred $16 million, $11 million, $17 million, $5 million, and $16 million, respectively, of restructuring expenses. See Note 5 of the Notes to Consolidated Financial Statements for additional information.

- During fiscal 2018, 2016, 2015, and 2014, we recorded impairment charges of $3 million, $10 million, $8 million, and $3 million, respectively. See Notes 5 and 12 of the Notes to Consolidated Financial Statements for additional information.

- During fiscal 2018, we recorded provisional income tax charges totaling $38 million as a result of tax legislation enacted by the U.S. government in December 2017. See Note 7 of the Notes to Consolidated Financial Statements for additional information.

- During fiscal 2016, we recorded $42 million of non-cash pension settlement losses and a $10 million gain related to an insurance settlement for equipment losses. See Notes 16 and 1 of the Notes to Consolidated Financial Statements for additional information.

- During fiscal 2014, we reversed $119 million of deferred tax asset valuation allowances in the U.S.

Table of Contents

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

Overview

Founded in 1916, Modine Manufacturing Company is a global leader in thermal management systems and components, bringing heating and cooling technology and solutions to diversified global markets. We operate on five continents, in 20 countries, and employ approximately 11,700 persons worldwide.

Our primary product groups include i) powertrain cooling and engine cooling; ii) coils, coolers, and coatings; and iii) heating, ventilation and air conditioning. Our products are used in on- and off-highway original-equipment vehicular applications. In addition, we provide our thermal management technology and solutions to a wide array of commercial, industrial, and building heating, ventilating, air conditioning, and refrigeration markets.

Company Strategy

During fiscal 2018, we successfully integrated our recently-acquired Luvata HTS business, which now operates as our CIS segment. This acquisition, which was completed in late fiscal 2017, was particularly key in achieving our “Diversify” and “Grow “objectives within our SDG strategic transformation initiative launched in fiscal 2016. Through this acquisition, we successfully broadened our customer base, reduced our reliance upon vehicular end markets by increasing our presence in non-vehicular markets, and grew our company with CIS segment net sales of $620 million in fiscal 2018. We’ve been focused on realizing the previously-announced $15 million of targeted cost synergies in three to four years following this acquisition and believe we are on track to exceed this target.

In addition, we’ve continued strengthening our company. Our actions during fiscal 2018 have included i) the closure of a CIS manufacturing facility in Austria, aimed at reducing excess capacity and lowering manufacturing costs in Europe, ii) targeted headcount reductions in our Europe segment, which have resulted in lower operating and SG&A cost structures, and iii) product line transfers to Hungary from other Europe segment manufacturing facilities, aimed at expanding our low-cost country footprint in Europe and ensuring continued competitiveness in the region.

Looking ahead, we are confident that our SDG strategy will keep us grounded, thriving, and transforming. Our company’s foundation is rooted in thermal management, proven products and our commitment to always improve and always innovate, which we believe will continue to ground us as we broaden our foundation and continue to diversify our business. Our business is thriving and we are growing both domestically and abroad. Our Asia segment has grown significantly and our planned expansion in China will be instrumental to meeting demand in the region’s vehicular markets. Looking forward, we aim to continue transforming our company and the thermal management industry by diligently analyzing our market positions and making strategic decisions about where we want to focus both our capital and resources. We are focused on high-return, high-growth and high-performing business opportunities, and, as a stronger company, we believe we have the ability to pursue strategic opportunities in new channels and with new customers around the world. We anticipate the demand for more economical, efficient and sustainable technologies will drive innovation across the markets we serve. We believe our ability to quickly react to rapidly evolving markets will position us well to provide greater value and innovative solutions to our customers and to continue to deliver sustainable shareholder value.

Development of New Products and Technology

Our ability to develop new products and technologies based upon our building block strategy for new and emerging markets is one of our competitive strengths. Under this strategy, we focus on creating core technologies that form the basis for multiple products and product lines across multiple business segments. Each of our business segments have a strong heritage of new product development, and our entire global technology organization benefits from mutual strengths. We own four global, state-of-the-art technology centers, dedicated to the development and testing of products and technologies. The centers are located in Racine, Wisconsin, Grenada, Mississippi, Pocenia, Italy and Bonlanden, Germany. Our reputation for providing high quality products and technologies has been a Company strength valued by our customers.

Table of Contents

We continue to benefit from relationships with customers that recognize the value of having us participate directly in product design, development and validation processes. This has resulted, and we expect it to continue to result, in strong, long-term customer relationships with companies that value partnerships with their suppliers.

Strategic Planning and Corporate Development

We employ both short-term (one year) and longer-term (five-to-seven year) strategic planning processes, which enable us to continually assess our opportunities, competitive threats, and economic market challenges.

We devote significant resources to global strategic planning and development activities to strengthen our competitive position. Our recently-acquired CIS segment increased our industrial portfolio, broadened our customer base, reduced cyclical exposure, and expanded our growth profile. We expect to continue to pursue acquisitions in “industrial” markets and expand our market share in high-growth engine and powertrain cooling areas through focused research and development activities and commercial pursuits.

Operational and Financial Discipline

We operate in a dynamic, global marketplace; therefore, we manage our business with a disciplined focus on increasing productivity and reducing waste. The nature of the global marketplace requires us to move toward a greater manufacturing scale in order to create a more competitive cost base. In order to optimize our cost structure and improve efficiency of our operations, we have engaged in restructuring activities in our CIS, Europe, Americas and BHVAC segments during fiscal 2018. In addition, as costs for materials and purchased parts may rise from time to time due to increases in commodity markets, we seek low-cost sourcing, when appropriate, and enter into contracts with some of our customers that provide for commodity price adjustments, on a lag basis.

We follow a rigorous financial process for investment and returns, intended to enable increased profitability and cash flows over the long term. We place particular emphasis on working capital improvement and prioritization of our capital investments.

Our executive management incentive compensation (annual cash incentive) plan for fiscal 2018 was based upon consolidated ROACE and operating income growth. These performance goals drive alignment of management and shareholders’ interests in both our asset management decisions and earnings growth targets. In addition, we provide a long-term incentive compensation plan for officers and certain key employees to attract, retain, and motivate employees who directly impact the long-term performance of our company. The plan is comprised of stock awards, stock options, and performance-based stock awards. The performance-based stock awards for the fiscal 2018 through 2020 performance period are based upon three-year average consolidated ROACE and three-year average annual revenue growth.

Segment Information – Strategy, Market Conditions and Trends

Each of our operating segments is managed by a vice president and has separate strategic and financial plans, and financial results, all of which are reviewed by our chief operating decision maker. These plans and results are used by management to evaluate the performance of each segment and to make decisions on the allocation of resources. Effective April 1, 2018, we combined our Americas, Europe, and Asia segment operations with the objective of operating as a more global, product-based organization. As part of this segment combination and our CIS integration activities, we also merged our Americas coils business into the CIS segment and expect to achieve operational improvements and organizational efficiencies as a result. Beginning for fiscal 2019, we will report financial results for the new Vehicular Thermal Solutions segment, which will include the current Americas, Europe and Asia segments.

Americas (27 percent of fiscal 2018 net sales)

Our Americas segment includes powertrain and engine cooling products and technologies that we provide to the automotive, commercial vehicle, and off-highway markets in North and South America. In addition, the Americas segment provides coils products to the commercial refrigeration, residential heating, commercial heating, and air conditioning markets, and also serves Brazil's automotive and commercial vehicle aftermarkets. The Americas coils products are highly complementary to those of our recently-acquired CIS segment.

Table of Contents
Sales volume in the Americas segment significantly increased during fiscal 2018, as compared with the prior year, primarily due to higher sales to certain key end markets. In North America, we benefited from a substantial recovery in the off-highway market and experienced sales volume increases to automotive customers despite a relatively flat automotive market. The North American commercial vehicle market also experienced significant growth during the year; however, our sales volume to commercial vehicle customers lagged behind the overall market trend due to the wind-down of certain commercial vehicle programs. In South America, our primary markets served experienced considerable recovery during fiscal 2018. We anticipate markets in North and South America will experience moderate growth in fiscal 2019. We will continue to target higher-growth markets, within which we expect to benefit from rising fuel efficiency or emissions standards, including the U.S. automotive market which is influenced by vehicle electrification.

Our Americas segment will continue to focus on growth where our products and manufacturing footprint create a competitive advantage. We are focusing on improving our operating leverage through manufacturing improvements. This includes launching new programs efficiently, as well as improving the utilization of our manufacturing footprint.

Europe (27 percent of fiscal 2018 net sales)

Our Europe segment provides powertrain and engine cooling systems, as well as vehicular climate control components, to OEMs and Tier 1 suppliers in the automotive, commercial vehicle, and off-highway markets.

Overall, economic conditions in Europe continued to show modest growth during fiscal 2018, as compared with the prior year. Sales volume to commercial vehicle customers declined in fiscal 2018, primarily due to the planned wind-down of several commercial vehicle programs. The premium automotive market grew slightly during fiscal 2018, while the off-highway markets were relatively flat. Sales volume growth was amplified by favorable exchange rates during the year, namely the strengthening of the euro versus the U.S. dollar. We expanded our production capacity in Hungary and transferred certain product lines from other manufacturing facilities located in higher-cost countries, allowing us to quote competitively and providing additional capacity for both new and existing rapidly growing product lines. Also during fiscal 2018, our Europe segment initiated targeted headcount reductions in support of its objective to reduce operational and SG&A cost structures.

Our Europe segment is focused on continuous improvements and cost containment. We expect continued price-reduction pressure from our customers, along with increased global customer service expectations and competition from suppliers with significant scale and/or which are operating in lower-cost locations. Our manufacturing footprint activities in Europe have favorably impacted our financial results and strengthened our overall competitiveness over the past several years. We believe our Europe segment is well-positioned for improved long-term financial results, driven by our strong customer reputation for technology, service, and program management.

Asia (8 percent of fiscal 2018 net sales)

Our Asia segment provides powertrain cooling systems and engine products to customers in the automotive, off-highway, and commercial vehicle markets.

During fiscal 2018, Asia segment sales significantly increased, primarily due to significant recovery of off-highway markets in China and Korea and maturing program volumes to automotive customers in China and India. We are continuing to ramp up production of aluminum oil coolers in our facility in Shanghai, China, and production levels at our manufacturing facilities in Changzhou, China and Chennai, India also increased in fiscal 2018. We expect this trend to continue in fiscal 2019. In order to provide additional capacity for growth, we are expanding our manufacturing capacity in Changzhou, China. We manufacture various stainless steel products in China within our Modine Puxin Thermal System (Jiangsu) Co., Ltd. joint venture. This joint venture continues to expand in sales and product offerings to local and global customers. In recent years, our technology, performance, quality, and reputation have enabled us to win new engine products and powertrain cooling business in Asia. Emissions standards in China and India have historically lagged behind those in North America and Europe. As a result, some local on- and off-highway powertrain cooling customers have focused on price more than technology. However, emissions standards in Asia are expected to change in the coming years and we expect to benefit from additional powertrain (e.g., electric vehicle) and engine cooling opportunities, as a result. We do expect, however, that customers in the Asia markets will remain very price-sensitive.

Table of Contents

Our strategy in this segment is to increase sales volume levels and enhance sustained profitability. Our focus is on securing incremental business with existing and new product offerings and to further diversify our customer base. Simultaneously, we are focused on controlling costs and increasing our asset utilization and manufacturing capabilities. We believe our Asia segment is well positioned for growth and new programs in fiscal 2019 and beyond.

Commercial and Industrial Solutions (29 percent of fiscal 2018 net sales)

Our CIS segment provides a broad offering of thermal management products to the HVAC&R markets, including solutions tailored to indoor and mobile climates, food storage and transport-refrigeration, and industrial processes. CIS's primary product groups include coils, coolers, and coatings. Our coils products include custom-designed condensers, evaporators, round-tube solutions, as well as steam and water/fluid coils. Our coolers include commercial refrigeration units, which are used across the food supply chain as well as for precision climate control for other applications such as data centers, and other types such as carbon dioxide and ammonia unit coolers, remote condensers, transformer oil coolers, and brine coolers. In addition, we offer proprietary coating solutions for corrosion protection, prolonging the life of heat-transfer equipment.

We are continuing to harmonize the CIS business processes with those of the rest of our Company. During fiscal 2018, CIS experienced modest growth. Strength in the North America recreational vehicle air conditioning and China industrial power markets was partially offset by weakness in the European industrial power market. We expect modest growth in each of the CIS markets we serve during fiscal 2019.

Looking forward, our strategy in this segment is to realize potential synergies and grow future earnings. We are working towards our goal of attaining $15 million of synergy savings over the first two years of operations. We are deriving cost savings from a variety of synergy opportunities including procurement activities, operational improvements, plant consolidation, system conversions, and organizational efficiencies. We believe our CIS segment is well-positioned for sustained, positive long-term financial results, driven in particular by growing market demand.

Building HVAC (9 percent of fiscal 2018 net sales)

Our BHVAC segment manufactures and distributes a variety of original equipment and aftersales HVAC products, primarily for commercial buildings and related applications in North America, the United Kingdom, mainland Europe, the Middle East, Asia, and Africa. We sell and distribute our heating, ventilation and cooling products through wholesalers, distributors, consulting engineers, contractors and building owners for applications such as warehouses, repair garages, greenhouses, residential garages, schools, data centers, manufacturing facilities, hotels, hospitals, restaurants, stadiums, and retail stores. Our heating products include gas (natural and propane), electric, oil and hydronic unit heaters, low- and high-intensity infrared, and large roof-mounted direct- and indirect-fired makeup air units. Our ventilation products include single-packaged vertical units and unit ventilators used in school room applications, air-handling equipment, and rooftop packaged ventilation units used in a variety of commercial building applications. Our cooling products include precision air conditioning units used primarily for data center cooling applications, air- and water-cooled chillers, and ceiling cassettes, which are also used in a variety of commercial building applications.

Economic conditions, such as demand for new commercial construction, building renovations, including HVAC replacement, growth in data centers and school renovations, and higher efficiency requirements, are growth drivers for our building HVAC products. During fiscal 2018, sales improved across all of our North America product platforms, including heating, ventilation, air conditioning, and aftersales. Our U.K. business experienced sales volume improvements in air-handling equipment and aftersales, but also experienced unfavorable currency impacts during the first half of the fiscal year. Late in fiscal 2018, we made the strategic decision to discontinue manufacturing and selling products to the North American residential geothermal heat pump market and, as a result, recorded a $1.2 million impairment charge for intangible assets we will no longer use.

We expect continued growth in each of the HVAC markets we serve during fiscal 2019. The markets we serve are heavily impacted by construction activity, building regulations, and owner/occupant comfort requirements. Growth rates in these markets have recently shown some strength, as manufacturing, housing, and business investment continue to increase. In fiscal 2019, we expect sales growth in our BHVAC segment through the introduction of new and unique products for the markets we serve and focused market share gains.

Table of Contents

Consolidated Results of Operations

On November 30, 2016, we acquired Luvata HTS for consideration totaling $415.6 million ($388.2 million, net of cash acquired). Operating as our CIS segment, this business is a leading global supplier of coils, coolers and coatings to the heating, ventilation, air conditioning, and refrigeration industry. As we have consolidated CIS financial results since the acquisition date, fiscal 2017 included four months of financial results from CIS operations.

In December 2017, the Tax Cuts and Jobs Act ("Tax Act") was enacted and included numerous changes to existing U.S. tax regulations, including U.S. corporate tax rates, business deductions, and taxes on income in foreign jurisdictions. During fiscal 2018, we recorded provisional charges totaling $38 million for certain income tax effects of the Tax Act. See Note 7 of the Notes to Consolidated Financial Statements for additional information

Fiscal 2018 net sales increased $600 million, or 40 percent, from the prior year, primarily due to $442 million of additional sales from our CIS segment, which we owned for four months of fiscal 2017, and higher sales in all of our other operating segments. Gross profit increased $103 million, including $66 million of additional contribution from our CIS segment. SG&A expenses increased $43 million, primarily due to a $38 million increase in SG&A expenses in our CIS segment. During fiscal 2018, we recorded $16 million of restructuring expenses, primarily related to a facility closure in our CIS segment and targeted headcount reductions in our Europe segment. Fiscal 2018 operating income increased $50 million to $92 million. Our fiscal 2018 net earnings of $24 million increased $9 million compared with the prior year, primarily due to the $50 million increase in operating income, partially offset by $38 million of provisional charges associated with the Tax Act and higher interest expense.

Fiscal 2017 net sales increased $150 million, or 11 percent, from the prior year, primarily due to $178 million of incremental sales from our CIS segment and higher sales in our Asia segment, partially offset by lower sales in our Americas and BHVAC segments. Gross profit increased $20 million, as the CIS segment contributed $26 million of incremental gross profit as compared to fiscal 2016. During fiscal 2017, we recorded $11 million of restructuring expenses for activities intended to better optimize our cost structure and improve the efficiency of our operations. In addition, we incurred $15 million of costs directly related to the acquisition and integration of Luvata HTS. Fiscal 2017 operating income increased $5 million to $42 million. Our fiscal 2017 net earnings of $15 million, as compared with the prior year net loss of $1 million, were favorably impacted by the absence of pension settlement losses totaling $42 million in fiscal 2016.

The following table presents our consolidated financial results on a comparative basis for fiscal years 2018, 2017, and 2016.

	Years ended March 31,					
	2018		2017		2016	
(in millions)	$'s	% of sales	$'s	% of sales	$'s	% of sales
Net sales	$2,103	100.0 %	$1,503	100.0 %	$1,353	100.0 %
Cost of sales	1,747	83.0 %	1,249	83.1 %	1,119	82.7 %
Gross profit	357	17.0 %	254	16.9 %	234	17.3 %
Selling, general and administrative expenses	246	11.7 %	203	13.5 %	170	12.6 %
Restructuring expenses	16	0.8 %	11	0.7 %	17	1.2 %
Impairment charges	3	0.1 %	-	-	10	0.7 %
Gain on sale of facilities	-	-	(2)	-0.1 %	-	-
Operating income	92	4.4 %	42	2.8 %	37	2.7 %
Interest expense	(26)	-1.2 %	(17)	-1.1 %	(11)	-0.8 %
Other expense - net	(3)	-0.2 %	(4)	-0.3 %	(36)	-2.6 %
Earnings (loss) before income taxes	63	3.0 %	21	1.4 %	(10)	-0.7 %
(Provision) benefit for income taxes	(40)	-1.9 %	(6)	-0.4 %	9	0.6 %

Net earnings (loss)	$24	1.1 %	$15	1.0 %	$(1)	-0.1 %

Table of Contents
Year Ended March 31, 2018 Compared with Year Ended March 31, 2017:

Fiscal 2018 net sales increased $600 million, or 40 percent, from the prior year, primarily due to $442 million of additional sales from our CIS segment, which we owned for four months of fiscal 2017, and higher sales in all of our other operating segments, and a $55 million favorable impact of foreign currency exchange rate changes.

Fiscal 2018 gross profit of $357 million increased $103 million from the prior year, primarily due to $66 million of additional gross profit from our recently-acquired CIS segment and higher gross profit in our Asia, BHVAC, and Americas segments. Gross profit was favorably impacted by $9 million from foreign currency exchange rate changes. Gross margin improved 10 basis points to 17.0 percent, primarily due to higher sales volume, savings resulting from cost-reduction initiatives, improved production efficiencies, and the absence of a $4 million inventory purchase accounting adjustment recorded in the prior year, partially offset by unfavorable material costs and incremental depreciation and amortization expense resulting from purchase accounting for Luvata HTS.

Fiscal 2018 SG&A expenses of $246 million increased $43 million from the prior year, primarily due to a $38 million increase in SG&A expenses in our CIS segment, $4 million of strategy consulting fees incurred during the current year, higher compensation-related expenses, and a $4 million unfavorable impact of foreign currency exchange rate changes, partially offset by lower costs incurred related to the acquisition of Luvata HTS. SG&A expenses, as a percentage of net sales, decreased 180 basis points compared with the prior year.

Restructuring expenses of $16 million in fiscal 2018 increased $5 million compared with the prior year, primarily due to severance-related expenses in the CIS segment related to the closure of a manufacturing facility in Austria.

During fiscal 2018, we recorded impairment charges totaling $3 million related to the closure of the CIS manufacturing facility in Austria and the discontinuance of a product line in our BHVAC segment.

During fiscal 2017, we sold two previously-closed manufacturing facilities within our Americas segment and a facility within our Europe segment. As a result of these sales, we recognized net gains totaling $2 million.

Operating income of $92 million in fiscal 2018 represents a $50 million improvement compared with the prior year, primarily due to $18 million of additional operating income contributed by our CIS segment and higher earnings in the Americas, Asia and BHVAC segments.

Fiscal 2018 interest expense increased $9 million compared with the prior year, primarily due to debt issued to finance a significant portion of our acquisition of Luvata HTS.

The provision for income taxes was $40 million and $6 million in fiscal 2018 and 2017, respectively. The $34 million increase was primarily due to $38 million of provisional charges recorded in fiscal 2018 related to the Tax Act and increased operating earnings in the current year, partially offset by income tax benefits totaling $14 million resulting from i) a development tax credit in Hungary ($9 million); ii) the reversal of a portion of the valuation allowance in a foreign jurisdiction ($3 million); and iii) a reduction of unrecognized tax benefits resulting from a lapse in statutes of limitations ($2 million), and the absence of a $2 million provision recorded in the prior year to establish a valuation allowance in a separate foreign jurisdiction. We do not expect the impact of the development tax credit in Hungary to be significant in fiscal 2019. It is possible that we may release the tax valuation allowance (approximately $3 million) in a foreign jurisdiction during fiscal 2019. See Note 7 of the Notes to Consolidated Financial Statements for additional information regarding the Tax Act and income tax valuation allowances.

Year Ended March 31, 2017 Compared with Year Ended March 31, 2016:

Fiscal 2017 net sales increased $150 million, or 11 percent, from the prior year, primarily due to $178 million of incremental sales from our CIS segment and higher sales in our Asia segment, partially offset by lower sales in our Americas and BHVAC segments. Sales volume increases in our BHVAC segment were more than offset by an $11 million unfavorable impact of foreign currency exchange rate changes.

Fiscal 2017 gross profit of $254 million increased $20 million from the prior year, primarily due to $26 million of gross profit contributed by the CIS segment. In addition, foreign currency exchange rate changes negatively impacted fiscal 2017 gross profit by $2 million. Gross margin, however, declined 40 basis points to 16.9 percent, primarily due to temporary production inefficiencies in the Americas segment, a $4 million unfavorable impact of an inventory purchase accounting adjustment, and unfavorable material costs, partially offset by the benefit of cost savings resulting from procurement initiatives.

Table of Contents

Fiscal 2017 SG&A expenses of $203 million increased $33 million from the prior year, primarily due to $19 million of SG&A expenses in our CIS segment and $15 million of costs incurred directly related to the acquisition and integration of Luvata HTS.

Restructuring expenses decreased $6 million in fiscal 2017 compared with the prior year, primarily due to lower severance expenses, partially offset by higher equipment transfer and plant consolidation costs in the Americas segment.

During fiscal 2017, we sold two previously-closed manufacturing facilities within our Americas segment and a facility within our Europe segment. As a result of these sales, we recognized net gains totaling $2 million.

In fiscal 2016, we recorded a $10 million impairment charge to write down the carrying value of a manufacturing facility in Germany to fair value.

Operating income of $42 million in fiscal 2017 represents a $5 million improvement compared with the prior year. Fiscal 2017 operating performance improved in our Europe and Asia segments, while operating performance declined in our Americas and BHVAC segments. Operating income was favorably impacted by the absence of a $10 million impairment charge recognized in the prior year, $8 million of operating income contributed by the CIS segment, and lower restructuring expenses, partially offset by acquisition and integration costs and the impact of the inventory purchase accounting adjustment totaling $19 million.

Fiscal 2017 interest expense increased $6 million compared with the prior year, primarily due to debt issued to finance a significant portion of our acquisition of Luvata HTS.

Other expense in fiscal 2016 included $42 million of pension settlement losses and a $10 million gain related to an insurance settlement for equipment losses resulting from a fire at our Airedale faclility in the U.K. in fiscal 2014.

Our provision for income taxes was $6 million in fiscal 2017, compared with a benefit for income taxes of $9 million in fiscal 2016. The income tax benefit in fiscal 2016 included a $16 million benefit related to pension settlement losses and a $3 million benefit from the reversal of a deferred tax asset valuation allowance in a foreign tax jurisdiction. The income tax provision in fiscal 2017 included a $2 million provision to establish a valuation allowance in a separate foreign tax jurisdiction.

Table of Contents

Segment Results of Operations

Since the date we acquired Luvata HTS (November 30, 2016), we have included CIS segment financial results within our consolidated results of operations. As CIS financial results were not included in our consolidated financial results for the full year in fiscal 2017, we have not provided separate discussion of our CIS segment below. The contributions of our CIS segment are included within the discussion of our consolidated financial results above.

Effective April 1, 2018, we combined our Americas, Europe, and Asia segment operations with the objective of operating as a more global, product-based organization. As part of this segment combination and our CIS integration activities, we also merged our Americas coils business into the CIS segment and expect to achieve operational improvements and organizational efficiencies as a result. Beginning for fiscal 2019, we will report financial results for the new Vehicular Thermal Solutions segment, which will include the current Americas, Europe and Asia segments.

Americas

	Years ended March 31,								
	2018			2017			2016		
(in millions)	$'s	% of sales		$'s	% of sales		$'s	% of sales	
Net sales	$581	100.0	%	$534	100.0	%	$586	100.0	%
Cost of sales	489	84.2	%	447	83.7	%	485	82.9	%
Gross profit	92	15.8	%	87	16.3	%	100	17.1	%
Selling, general and administrative expenses	52	9.0	%	53	10.0	%	55	9.3	%
Restructuring expenses	2	0.3	%	7	1.3	%	9	1.5	%
Gain on sale of facilities	-	-		(1)	-0.2	%	-	-	
Operating income	$38	6.6	%	$28	5.2	%	$37	6.3	%

Year Ended March 31, 2018 Compared with Year Ended March 31, 2017:

Americas net sales increased $47 million, or 9 percent, in fiscal 2018 compared with the prior year, primarily due to higher sales volume to off-highway, commercial vehicle and automotive customers, increased aftermarket sales in Brazil, and a $1 million favorable impact of foreign currency exchange rate changes. Gross profit increased $5 million, primarily due to higher sales volume. Gross margin declined 50 basis points, primarily due to unfavorable material costs and unfavorable sales mix, partially offset by improved production efficiencies. SG&A expenses decreased $1 million, primarily due to the absence of a $2 million charge recorded in the prior year related to a legal matter in Brazil, which has since been settled and paid, partially offset by legal costs incurred for an environmental matter associated with a previously-owned manufacturing facility. Restructuring expenses decreased $5 million, primarily due to lower plant consolidation and severance expenses. Operating income increased $10 million to $38 million, primarily due to higher gross profit and lower restructuring expenses.

Year Ended March 31, 2017 Compared with Year Ended March 31, 2016:

Americas net sales decreased $52 million, or 9 percent, in fiscal 2017 compared with the prior year, primarily due to lower sales volume to commercial vehicle and off-highway customers in North America, partially offset by higher sales volume to automotive customers and a $5 million favorable impact of foreign currency exchange rate changes. Gross profit decreased $13 million and gross margin declined 80 basis points to 16.3 percent in fiscal 2017. These decreases were primarily due to lower sales volume and temporary production inefficiencies in North America, largely related to product launches and plant consolidation activities, partially offset by cost savings resulting from procurement initiatives, favorable material costs and lower environmental costs related to a previously-owned manufacturing facility, as compared with the prior year. Fiscal 2017 SG&A expenses decreased $2 million from fiscal 2016, primarily due to lower compensation-related expenses and a higher recovery of development costs, partially offset by the $2 million Brazil legal charge. Restructuring expenses decreased $2 million, primarily due to lower severance expenses, partially offset by higher equipment transfer and plant consolidation costs. In addition, we sold two closed manufacturing facilities in North America and recognized gains totaling $1 million as a result. Operating income of $28 million in fiscal 2017 decreased $9 million compared with the prior year, primarily due to lower gross profit.

Table of Contents

Europe

	Years ended March 31,					
	2018		2017		2016	
(in millions)	$'s	% of sales	$'s	% of sales	$'s	% of sales
Net sales	$568	100.0 %	$524	100.0 %	$524	100.0 %
Cost of sales	484	85.3 %	443	84.4 %	455	86.7 %
Gross profit	84	14.7 %	82	15.6 %	70	13.3 %
Selling, general and administrative expenses	45	7.8 %	41	7.9 %	39	7.4 %
Restructuring expenses	6	1.0 %	3	0.6 %	6	1.2 %
Gain on sale of facility	-	-	(1)	-0.2 %	-	-
Impairment charge	-	-	-	-	10	1.9 %
Operating income	$34	5.9 %	$38	7.3 %	$15	2.8 %

Year Ended March 31, 2018 Compared with Year Ended March 31, 2017:

Europe net sales increased $44 million, or 8 percent, in fiscal 2018 compared with the prior year, primarily due to a $36 million favorable impact of foreign currency exchange rate changes and higher sales volume to automotive and off-highway customers, partially offset by the planned wind-down of certain commercial vehicle programs. Gross profit increased $2 million and was favorably impacted by $6 million from foreign currency exchange rate changes. Gross margin declined 90 basis points to 14.7 percent, primarily due to unfavorable material costs, the absence of favorable customer pricing settlements recorded in the prior year and higher depreciation expense resulting from recent production capacity investments, partially offset by improved production efficiencies. SG&A expenses increased $4 million, primarily due to a $3 million unfavorable impact of foreign currency exchange rate changes and higher compensation-related expenses. Restructuring expenses increased $3 million, primarily due to higher severance expenses and equipment transfer costs. Operating income of $34 million decreased $4 million, primarily due to higher SG&A and restructuring expenses.

Year Ended March 31, 2017 Compared with Year Ended March 31, 2016:

Europe net sales of $524 million in fiscal 2017 were consistent with the prior year, as higher sales volume to automotive customers was offset by lower sales volume to commercial vehicle and off-highway customers and a $3 million unfavorable impact of foreign currency exchange rate changes. Gross profit increased $12 million and gross margin improved 230 basis points to 15.6 percent in fiscal 2017, primarily due to cost savings resulting from procurement initiatives, favorable sales mix, and improved production efficiencies, partially offset by unfavorable material costs. SG&A expenses increased $2 million in fiscal 2017, primarily due to higher compensation-related expenses. Restructuring expenses decreased $3 million, primarily due to lower severance expenses. In addition, we sold a manufacturing facility in Europe and recognized a gain of $1 million as a result. Operating income of $38 million in fiscal 2017 increased $23 million compared with the prior year, primarily due to higher gross profit and the absence of a $10 million impairment charge in the prior year.

Asia

	Years ended March 31,					
	2018		2017		2016	
(in millions)	$'s	% of sales	$'s	% of sales	$'s	% of sales
Net sales	$166	100.0 %	$112	100.0 %	$79	100.0 %
Cost of sales	135	81.7 %	93	83.2 %	67	84.5 %
Gross profit	30	18.3 %	19	16.8 %	12	15.5 %
Selling, general and administrative expenses	13	7.7 %	11	9.9 %	11	14.5 %
Operating income	$18	10.6 %	$8	6.9 %	$1	1.0 %

Table of Contents

Year Ended March 31, 2018 Compared with Year Ended March 31, 2017:

Asia net sales increased $54 million, or 48 percent, in fiscal 2018 compared with the prior year, primarily due to higher sales volume to off-highway customers in all geographic markets that we serve and automotive customers in China and India. Foreign currency exchange rate changes favorably impacted sales in fiscal 2018 by $5 million. Gross profit increased $11 million and gross margin improved 150 basis points to 18.3 percent, primarily due to higher sales volume. SG&A expenses increased $2 million compared with the prior year, yet decreased 220 basis points as a percentage of sales. The increase in SG&A expenses was primarily due to higher compensation-related expenses. Operating income of $18 million increased $10 million, primarily due to higher gross profit.

Year Ended March 31, 2017 Compared with Year Ended March 31, 2016:

Asia net sales increased $33 million, or 42 percent, in fiscal 2017 compared with the prior year, primarily due to higher sales volume to automotive and off-highway customers in China and incremental sales from a joint venture in China that was formed in late fiscal 2016, partially offset by a $4 million unfavorable impact of foreign currency exchange rate changes. Gross profit increased $7 million and gross margin improved 130 basis points to 16.8 percent in fiscal 2017, primarily due to higher sales volume. Fiscal 2017 SG&A expenses were consistent with the prior year. Operating income of $8 million in fiscal 2017 increased $7 million compared with the prior year, primarily due to higher gross profit.

BHVAC

	Years ended March 31,								
	2018			2017			2016		
(in millions)	$'s	% of sales		$'s	% of sales		$'s	% of sales	
Net sales	$191	100.0	%	$172	100.0	%	$181	100.0	%
Cost of sales	133	69.7	%	124	72.2	%	127	70.1	%
Gross profit	58	30.3	%	48	27.8	%	54	29.9	%
Selling, general and administrative expenses	36	18.8	%	34	19.7	%	39	21.6	%
Restructuring expenses	-	0.2	%	1	0.4	%	1	0.6	%
Impairment charge	1	0.7	%	-	-		-	-	
Operating income	$20	10.6	%	$13	7.7	%	$14	7.7	%

Year Ended March 31, 2018 Compared with Year Ended March 31, 2017:

BHVAC net sales increased $19 million, or 11 percent, in fiscal 2018 compared with the prior year, primarily due to higher heating and ventilation product sales in North America and a $1 million favorable impact of foreign currency exchange rate changes. Gross profit increased $10 million and gross margin improved 250 basis points to 30.3 percent, primarily due to higher sales volume and improved production efficiencies in the U.K. SG&A expenses increased $2 million, primarily due to higher commission costs resulting from higher sales. As a percentage of sales, SG&A expenses decreased 90 basis points. Restructuring expenses decreased $1 million, primarily due to the absence of severance expenses incurred in the prior year. During fiscal 2018, we discontinued a geothermal product line and, as a result, recorded a $1 million impairment charge for intangible assets we will no longer use. Operating income of $20 million increased $7 million, primarily due to higher gross profit.

Year Ended March 31, 2017 Compared with Year Ended March 31, 2016:

BHVAC net sales decreased $9 million, or 5 percent, in fiscal 2017 compared with the prior year, primarily due to an $11 million unfavorable impact of foreign currency exchange rate changes and lower school ventilation and heating product sales in North America, partially offset by increased air conditioning product sales in the U.K. Gross profit decreased $6 million and gross margin declined 210 basis points to 27.8 percent in fiscal 2017, primarily due to unfavorable sales mix, unfavorable material costs and higher depreciation expense in the current year resulting from replacement assets associated with the Airedale fire, which we started to depreciate in the fourth quarter of fiscal 2016. In addition, gross profit was unfavorably impacted by $2 million from foreign currency exchange rate changes. Fiscal 2017 SG&A expenses decreased $5 million from fiscal 2016, primarily due to lower commission costs and compensation-related expenses and a $2 million favorable impact of foreign currency exchange rate changes. In fiscal 2017, we recorded $1 million of restructuring expenses consisting of severance expenses. Operating income of $13 million in fiscal 2017 decreased $1 million compared with the prior year, primarily due to lower gross profit, partially offset by lower SG&A expenses.

Table of Contents

Liquidity and Capital Resources

Our primary sources of liquidity are cash flow from operating activities, our cash and cash equivalents at March 31, 2018 of $39 million, and an available borrowing capacity of $170 million under lines of credit provided by banks in the United States and abroad. Given our extensive international operations, $36 million of our cash and cash equivalents are held by our non-U.S. subsidiaries. Amounts held by non-U.S. subsidiaries are available for general corporate use; however, these funds may be subject to foreign withholding taxes if repatriated. We have not encountered, and do not expect to encounter, any difficulty meeting the liquidity requirements of our global operations.

Net Cash Provided by Operating Activities

Net cash provided by operating activities in fiscal 2018 was $124 million, an increase of $82 million from $42 million in the prior year. This increase in operating cash flow primarily resulted from an increase in operating earnings, including contributions from our CIS segment, lower payments for costs associated with the acquisition and integration of Luvata HTS and restructuring expenses in the current year, and favorable net changes in working capital.

Net cash provided by operating activities in fiscal 2017 was $42 million, a decrease of $30 million from $72 million in the prior year. This decrease in operating cash flow was primarily due to payments for acquisition and integration costs, unfavorable net changes in working capital, and higher payments for restructuring activities.

Capital Expenditures

Capital expenditures of $71 million during fiscal 2018 increased $7 million compared with fiscal 2017, primarily due to capital expenditures by our recently-acquired CIS segment and equipment purchases to expand our manufacturing capacity in Hungary and China. In fiscal 2018, our capital spending primarily occurred in the Europe, Americas, and Asia segments, which totaled $27 million, $22 million and $12 million, respectively, and included tooling and equipment purchases in conjunction with new and renewal programs with customers, as well as investments to expand capacity in Hungary and China.

At March 31, 2018, our capital expenditure commitments totaled $24 million. Significant commitments included tooling and equipment expenditures for new and renewal programs with customers in the Europe, Americas, and Asia segments.

Dividends

We did not pay dividends in fiscal 2018, 2017, or 2016. We currently do not intend to pay dividends in fiscal 2019.

Debt

Our total debt outstanding decreased $32 million to $479 million at March 31, 2018 compared with the prior year, primarily due to repayments of debt, including repayments related to credit agreements used to finance a significant portion of the cash consideration for our acquisition of Luvata HTS in November 2016. See Note 15 of the Notes to Consolidated Financial Statements for additional information regarding our credit agreements.

Our debt agreements require us to maintain compliance with various covenants. As defined in the credit agreement, the term loans require prepayments of excess cash flows in the event our leverage ratio exceeds defined levels, or in the event of certain asset sales. In addition, under our primary debt agreements in the U.S., we are subject to leverage ratio covenants, the most restrictive of which requires us to limit our consolidated indebtedness, less a portion of our cash balance, both as defined by the credit agreement, to no more than three and one-quarter times consolidated net earnings before interest, taxes, depreciation, amortization, and certain other adjustments ("Adjusted EBITDA"). We are also subject to an interest expense coverage ratio covenant, which requires us to maintain Adjusted EBITDA of at least three times consolidated interest expense. At March 31, 2018, our leverage ratio and interest coverage ratio were 2.4 and 8.3, respectively. We were in compliance with our debt covenants as of March 31, 2018 and expect to remain in compliance during fiscal 2019 and beyond.

Table of Contents

Off-Balance Sheet Arrangements

None.

Contractual Obligations

	March 31, 2018				
(in millions)	Total	Less than 1 year	1 - 3 years	4 - 5 years	More than 5 years
Long-term debt	$423.5	$ 39.5	$ 148.9	$ 201.8	$ 33.3
Interest associated with long-term debt	59.3	18.0	28.2	8.7	4.4
Operating lease obligations	75.1	14.4	22.4	13.7	24.6
Capital expenditure commitments	24.1	21.9	2.2	-	-
Other long-term obligations (a)	33.4	3.5	6.0	5.3	18.6
Total contractual obligations	$615.4	$ 97.3	$ 207.7	$ 229.5	$ 80.9

(a) Includes $19 million for estimated transition tax payments related to the Tax Act, capital lease obligations and other long-term obligations. See Note 7 of the Notes to Consolidated Financial Statements for additional information on the Tax Act.

Our liabilities for pensions, postretirement benefits, and uncertain tax positions totaled $132 million as of March 31, 2018. We are unable to determine the ultimate timing of payments for these liabilities; therefore, we have excluded these amounts from the contractual obligations table above. We expect to contribute $6 million to our U.S. pension plans during fiscal 2019.

Critical Accounting Policies

The following critical accounting policies reflect the more significant judgments and estimates used in preparing our consolidated financial statements. Application of these policies results in accounting estimates that have the greatest potential for a significant impact on our financial statements. The following discussion of these judgments and estimates is intended to supplement the significant accounting policies presented in Note 1 of the Notes to Consolidated Financial Statements. In addition, recently issued accounting pronouncements that could significantly impact our financial statement are included in Note 1 of the Notes to Consolidated Financial Statements.

Acquisitions

From time to time, we make strategic acquisitions that have a material impact on our consolidated results of operations or financial position. We allocate the purchase price of acquired businesses to the identifiable tangible and intangible assets acquired and liabilities assumed in the transaction based upon their estimated fair values as of the acquisition date. We determine the estimated fair values using information available to us and engage third-party valuation specialists when necessary. The estimates we use to determine the fair value of long-lived assets, such as intangible assets, can be complex and require significant judgments. While we use our best estimates and assumptions, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statement of operations. We also estimate the useful lives of intangible assets to determine the amount of amortization expense to record in future periods. We periodically review the estimated useful lives assigned to our intangible assets to determine whether such estimated useful lives continue to be appropriate. During fiscal 2018, we completed the purchase price allocation for our acquisition of Luvata HTS. See Note 2 of the Notes to Consolidated Financial Statements for additional information.

Table of Contents
Revenue Recognition

We recognize revenue, including agreed-upon commodity prices, when the risks and rewards of ownership are transferred to our customers, which generally occurs upon shipment. Revenue is recorded net of applicable provisions for sales rebates, volume incentives, and returns and allowances. At the time of revenue recognition, we also record estimates for bad debt expense and warranty expense. We base these estimates on historical experience, current business trends, and current economic conditions. We recognize price increases that are agreed upon in advance as revenue when the products are shipped to our customers.

In fiscal 2019, we will adopt new revenue recognition accounting guidance. As a result, we expect to record an increase of less than $1 million to retained earnings as of April 1, 2018. See Note 1 of the Notes to Consolidated Financial Statements for additional information.

Impairment of Long-Lived Assets

We perform impairment evaluations of long-lived assets, including property, plant and equipment, intangible assets and equity investments, whenever business conditions or events indicate that those assets may be impaired. We consider factors such as operating losses, declining financial outlooks and market conditions, when evaluating the necessity for an impairment analysis. When the net asset values exceed undiscounted cash flows expected to be generated by the assets, or the decline in value is considered to be “other than temporary,” we write down the assets to fair value and record an impairment charge to current operations. We estimate fair value in various ways depending on the nature of the underlying assets. Fair value is generally based upon appraised value, estimated salvage value, or selling prices under negotiation, as applicable.

The most significant long-lived assets we evaluated for impairment indicators were property, plant and equipment and intangible assets, which totaled $504 million and $130 million, respectively, at March 31, 2018. Within property, plant and equipment, the most significant assets evaluated are buildings and improvements and machinery and equipment. Our most significant intangible assets evaluated are customer relationships, trade names, and acquired technology, the majority of which are related to our CIS segment. We evaluate impairment at the lowest level of separately identifiable cash flows, which is generally at the manufacturing plant level. We monitor manufacturing plant financial performance to determine whether indicators exist that would require an impairment evaluation for the facility. This includes significant adverse changes in plant profitability metrics; substantial changes in the mix of customer products manufactured in the plant; changes in manufacturing strategy; and the shifting of programs to other facilities under a manufacturing realignment strategy. When such indicators are present, we perform an impairment evaluation. During fiscal 2018, we recorded impairments totaling $3 million related to the closure of a CIS manufacturing facility in Austria and the discontinuance of a product line in our BHVAC segment. See Notes 5 and 12 of the Notes to Consolidated Financial Statements for additional information.

Impairment of Goodwill

We perform goodwill impairment tests annually, as of March 31, unless business events or other conditions exist that require a more frequent evaluation. We consider factors such as operating losses, declining financial and market outlooks, and market capitalization when evaluating the necessity for an interim impairment analysis. We test goodwill for impairment at a reporting unit level. Reporting units resulting from recent acquisitions generally represent the highest risk of impairment, which typically decreases as the businesses are integrated into the Company and positioned for future operating and financial performance. Our first step in the goodwill impairment test is to compare the fair value of the reporting unit to its carrying value. We determine the fair value of a reporting unit based upon the present value of estimated future cash flows. If the fair value of the reporting unit exceeds the carrying value of the unit’s net assets, goodwill of that reporting unit is not impaired and further testing is not required. If the carrying value of the reporting unit’s net assets exceeds the fair value of the unit, then we perform the second step of the impairment test to determine the implied fair value of the reporting unit's goodwill and any impairment charge. In estimating the implied fair value of goodwill for a reporting unit, we assign fair value to the assets and liabilities associated with the reporting unit as if the reporting unit had been acquired in a business combination. Any excess of the carrying value of the reporting unit goodwill over its implied fair value is recorded as an impairment charge. Determining the fair value of a reporting unit involves judgment and the use of significant estimates and assumptions, which include assumptions regarding the revenue growth rates and operating profit margins used to calculate estimated future cash flows, the risk-adjusted discount rate, business trends and market conditions. We determine the expected future revenue growth rates and operating profit margins after consideration of our historical revenue growth rates and earnings levels, our assessment of future market potential and our expectations of future business performance. The discount rate used in determining discounted cash flows is a rate corresponding to our cost of capital, adjusted for country-specific risks where appropriate.

Table of Contents

At March 31, 2018, our goodwill totaled $174 million, primarily related to our CIS and BHVAC segments. We conducted annual goodwill impairment tests for our CIS, BHVAC and Asia segments during the fourth quarter of fiscal 2018 by applying a fair value-based test and determined the fair value of the reporting units exceeded their respective book values.

Warranty Costs

We estimate costs related to product warranties and accrue for such costs at the time of the sale, within cost of sales. We estimate warranty costs based upon the best information available, which includes statistical and analytical analysis of both historical and current claim data. We adjust our warranty accruals, which totaled $9 million at March 31, 2018, if it is probable that expected claims will differ from previous estimates.

Pension Obligations

Our calculation of the expense and liabilities of our pension plans is dependent upon various assumptions. At March 31, 2018, our pension liabilities totaled $116 million. The most significant assumptions include the discount rate, long-term expected return on plan assets, and mortality rate tables. We base our selection of assumptions on historical trends and economic and market conditions at the time of valuation. In accordance with U.S. GAAP, actual results that differ from these assumptions are accumulated and amortized over future periods. These differences impact future pension expenses. Currently, participants in our domestic pension plans are not accruing benefits based upon their current service as the plans do not include increases in annual earnings or for future service in calculating the average annual earnings and years of credited service under the pension plan formula.

For the following discussion regarding sensitivity of assumptions, all amounts presented are in reference to our domestic pension plans, since our domestic plans comprise all of our benefit plan assets and the large majority of our pension plan expense.

To determine the expected rate of return on pension plan assets, we consider such factors as (a) the actual return earned on plan assets, (b) historical rates of return on the various asset classes in the plan portfolio, (c) projections of returns on those asset classes, (d) the amount of active management of the assets, (e) capital market conditions and economic forecasts, and (f) administrative expenses paid with the plan assets. The long-term rate of return utilized in fiscal 2018 and 2017 was 7.5 percent and 8.0 percent, respectively. For fiscal 2019, we have assumed a rate of 7.5 percent. A change of 25 basis points in the expected rate of return on assets would impact our fiscal 2019 pension expense by $0.4 million.

The discount rate reflects rates available on long-term, high-quality fixed-income corporate bonds on the measurement date of March 31. For fiscal 2018 and 2017, for purposes of determining our costs, we used a discount rate of 4.1 percent. We determined these rates based upon a yield curve that was created following an analysis of the projected cash flows from the affected plans. See Note 16 of the Notes to Consolidated Financial Statements for additional information. A change in the assumed discount rate of 25 basis points would impact our fiscal 2019 pension expense by less than $1 million.

Income Taxes

We operate in numerous taxing jurisdictions; therefore, we are subject to regular examinations by federal, state and non-U.S. taxing authorities. Due to the application of complex and sometimes ambiguous tax laws and rulings in the jurisdictions in which we do business, there is an inherent level of uncertainty within our worldwide tax provisions. Despite our belief that our tax return positions are consistent with applicable tax laws, it is possible that taxing authorities could challenge certain positions.

The Tax Act was enacted in December 2017 and included numerous changes to existing U.S. tax regulations, including U.S. corporate tax rates, business deductions, and taxes on income in foreign jurisdictions. Following the enactment, the Securities and Exchange Commission issued accounting guidance providing a one-year measurement period during which a company may complete its accounting for the impacts of the the Tax Act. During fiscal 2018, we recorded provisional charges totaling $38 million for certain income tax effects of the Tax Act. Our provisional estimates could be impacted based upon further analysis of the requirements and interpretive guidance associated with the Tax Act.

Table of Contents

Our deferred tax assets and liabilities reflect temporary differences between the amount of assets and liabilities for financial and tax reporting purposes. We adjust these amounts to reflect changes in tax rates expected to be in effect when the temporary differences reverse. We record a valuation allowance if we determine it is more likely than not that the net deferred tax assets in a particular jurisdiction will not be realized. This determination involves significant judgment. In performing this assessment on a jurisdiction-by-jurisdiction basis, we consider historical and projected financial results along with other pertinent information.

See Note 7 of the Notes to Consolidated Financial Statements for additional information regarding income taxes.

Other Loss Reserves

We maintain liabilities and reserves for a number of other loss exposures, such as environmental remediation costs, self-insurance reserves, uncollectible accounts receivable, regulatory compliance matters, and litigation. Establishing loss reserves for these exposures requires the use of estimates and judgment to determine the risk exposure and ultimate potential liability. We estimate these reserve requirements by using consistent and suitable methodologies for the particular type of loss reserve being calculated. See Note 18 of the Notes to Consolidated Financial Statements for additional information regarding contingencies and litigation.

Forward-Looking Statements

This report, including, but not limited to, the discussion under Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, contains statements, including information about future financial performance, accompanied by phrases such as "believes," "estimates," "expects," "plans," "anticipates," "intends," and other similar "forward-looking" statements, as defined in the Private Securities Litigation Reform Act of 1995. Modine's actual results, performance or achievements may differ materially from those expressed or implied in these statements, because of certain risks and uncertainties, including, but not limited to, those described under "Risk Factors" in Item 1A. in Part I. of this report and identified in our other public filings with the U.S. Securities and Exchange Commission. Other risks and uncertainties include, but are not limited to, the following:

Market Risks:

- Economic, social and political conditions, changes, challenges and unrest, particularly in the geographic, product and financial markets where we and our customers operate and compete, including, in particular, foreign currency exchange rate fluctuations, tariffs, inflation, changes in interest rates, recession and recovery therefrom, restrictions and uncertainty associated with cross-border trade, and the general uncertainties about the impact of regulatory and/or policy changes, including those related to tax and trade, that have been or may be implemented in the United States or by its trade partners, as well as continuing uncertainty regarding the longer-term implications of "Brexit";

- The impact of potential increases in commodity prices, which may be impacted by a variety of factors, including changes in trade laws and tariffs, and our ability to successfully manage our exposure and/or pass increasing prices of aluminum, copper, steel and stainless steel (nickel) on to customers, as well as the inherent lag in timing of such pass-through arrangements; and

- The impact of current and future environmental laws and regulations on our business and the businesses of our customers, including our ability to take advantage of opportunities to supply alternative new technologies to meet environmental and/or energy standards and objectives.

Operational Risks:

-

Our ability to realize cost and revenue synergies associated with our acquisition of Luvata HTS in accordance with our expectations, and to effectively manage any unanticipated risks that arise;

- The overall health and continually increasing price-down focus of our vehicular customers in light of economic and market-specific factors, and the potential impact on us from any deterioration in the stability or performance of any of our major customers;

- Our ability to maintain current customer programs and compete effectively for new business, including our ability to offset or otherwise address increasing pricing pressures from competitors and price reduction and overall service pressures from customers, particularly in the face of macro-economic instability;

- Unanticipated product or manufacturing difficulties or inefficiencies, including unanticipated program launch and product transfer challenges and warranty claims;

- Unanticipated delays or modifications initiated by major customers with respect to product launches, product applications or requirements;

- Unanticipated problems with suppliers meeting our time, quantity, quality and price demands, and the overall health of our suppliers;

- Our ability to consistently structure our operations in order to develop and maintain a competitive cost base with appropriately skilled and stable labor, while also positioning ourselves geographically, so that we can continue to support our customers with the technical expertise and market-leading products they demand and expect from Modine;

- Our ability to effectively and efficiently complete restructuring activities and realize the anticipated benefits thereof;

- Our ability to recruit and maintain managerial and leadership talent in light of tightening global labor markets;

- Our ability to protect our proprietary information and intellectual property from theft or attack by internal or external sources;

- Costs and other effects of the investigation and remediation of environmental contamination; particularly when related to the actions or inactions of others and/or facilities over which we have no control;

- Increasingly complex and restrictive laws and regulations, including those associated with being a U.S. public company and others present in various jurisdictions in which we operate, and the costs associated with compliance therewith;

- Work stoppages or interference at our facilities or those of our major customers and/or suppliers;

- The constant and increasing pressures associated with healthcare and associated insurance costs; and

- Costs and other effects of unanticipated litigation, claims, or other obligations.

Strategic Risks:

- Our ability to successfully take advantage of our increased presence in the “industrial” markets, with our CIS and BHVAC businesses, while maintaining appropriate focus on the market opportunities presented by our vehicular business;

- Our ability to identify and execute additional growth and diversification opportunities in order to position us for long-term success; and

- The potential expense, disruption or other impacts that could result from unanticipated actions by activist shareholders.

Table of Contents

Financial Risks:

- Our ability to fund our global liquidity requirements efficiently for Modine's current operations and meet our long-term commitments in the event of an unexpected disruption in or tightening of the credit markets or extended recessionary conditions in the global economy;
- The impact of potential increases in interest rates, particularly in LIBOR and EURIBOR in relation to our variable-rate debt obligations;
- Our ability to maintain our leverage ratio (net debt divided by Adjusted EBITDA, as defined in our credit agreements) in our target range of 1.5 to 2.5 in an efficient manner;
- The impact of foreign currency exchange rate fluctuations, particularly the value of the euro, Brazilian real, and British pound, relative to the U.S. dollar;
- The effects of the recently-enacted tax reform legislation in the U.S. on our business, some of which are uncertain and may be material; and
- Our ability to effectively realize the benefits of deferred tax assets in various jurisdictions in which we operate.

We do not assume any obligation to update any forward-looking statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

In the normal course of business, we are subject to market exposure from changes in foreign currency exchange rates, interest rates, commodity prices, credit risk and economic conditions.

Foreign Currency Risk

We are subject to the risk of changes in foreign currency exchange rates due to our operations in foreign countries. We have manufacturing facilities in Brazil, China, India, Mexico, South Africa, and throughout Europe. We also have joint ventures in China, Japan and South Korea. We sell and distribute products throughout the world and also purchase raw materials from suppliers in foreign countries. As a result, our financial results are affected by changes in foreign currency exchange rates and economic conditions in the foreign markets in which we do business. Whenever possible, we attempt to mitigate foreign currency risks on transactions with customers and suppliers in foreign countries by entering into contracts that are denominated in the functional currency of the entity engaging in the transaction. In addition, for certain transactions that are denominated in a currency other than the engaging entity's functional currency, we may enter into currency rate derivative contracts to further manage our foreign currency risk. In fiscal 2018, we recorded realized and unrealized foreign currency gains and losses that netted to a loss of $0.6 million, which we reported in other income and expense in the consolidated statement of operations. In addition, our consolidated financial results are impacted by the translation of revenue and expenses in foreign currencies into U.S. dollars. These translation impacts are affected by changes in exchange rates between the U.S. dollar and European currencies, primarily the euro, and changes between the U.S. dollar and the Brazilian real. In fiscal 2018, more than 50 percent of our sales were generated in countries outside the U.S. A change in foreign currency exchange rates will positively or negatively affect our sales; however, this impact will be offset, usually to a large degree, with a corresponding effect on our cost of sales and other expenses. In fiscal 2018, changes in foreign currency exchange rates positively impacted our sales by $55 million; however, the impact on our operating income was less than $3 million. Foreign currency exchange rate risk can be estimated by measuring the impact of a near-term adverse movement of 10 percent in foreign currency exchange rates. If these rates were 10 percent higher or lower during fiscal 2018, there would not have been a material impact on our fiscal 2018 earnings.

We maintain foreign-denominated, long-term debt obligations and long-term intercompany loans that are subject to foreign currency exchange risk. We seek to mitigate this risk through maintaining offsetting positions between external and intercompany loans; however, from time to time, we also enter into currency rate derivative contracts to manage the foreign exchange rate exposure. These derivative instruments are typically not accounted for as hedges, and accordingly, gains or losses on the derivatives are recorded in other income and expense in the consolidated statements of operations and act to offset any currency movement on the outstanding loans receivable or payable.

Table of Contents
Interest Rate Risk

We seek to reduce the potential volatility of earnings that could arise from changes in interest rates. We generally utilize a mixture of debt maturities and both fixed-rate and variable-rate debt to manage exposure to changes in interest rates. Interest on both our term loans and borrowings under our primary multi-currency revolving credit facility is based upon a variable interest rate, primarily either the London Interbank Offered Rate (“LIBOR”) or Euro Interbank Offered Rate (“EURIBOR”), plus 137.5 to 250 basis points, depending on our leverage ratio. We are subject to risk of fluctuations in LIBOR and EURIBOR and changes in our leverage ratio, which would affect the variable interest rate on our term loans and revolving credit facility and could create variability in interest expense. As of March 31, 2018, our outstanding borrowings on variable-rate term loans and revolving credit facility totaled $268 million and $21 million, respectively. Based upon our outstanding debt with variable interest rates at March 31, 2018, a 100 basis point increase in interest rates would increase our annual interest expense in fiscal 2019 by approximately $3 million.

Commodity Price Risk

We are dependent upon the supply of raw materials and supplies in our production processes and, from time to time, enter into firm purchase commitments for aluminum, copper, nickel, and natural gas. We maintain agreements with certain customers to pass through specified raw material price fluctuations in order to mitigate commodity price risk. The majority of these agreements contain provisions in which the pass-through of the price fluctuations can lag behind the actual fluctuations by three months or longer, and typically the arrangements are limited to the underlying material cost based upon the London Metal Exchange and exclude additional cost elements, such as fabrication.

Credit Risk

Credit risk represents the possibility of loss from a customer failing to make payment according to contract terms. Our principal credit risk consists of outstanding trade accounts receivable. At March 31, 2018, 36 percent of our trade accounts receivable balance was concentrated with our top ten customers. These customers operate primarily in the automotive, commercial vehicle, and off-highway markets and are influenced by similar market and general economic factors. In the past, credit losses from our customers have not been significant.

We manage credit risk through a focus on the following:

- Cash and investments – We review cash deposits and short-term investments to ensure banks have acceptable credit ratings, and short-term investments are maintained in secured or guaranteed instruments. We consider our holdings in cash and investments to be stable and secure at March 31, 2018;
- Trade accounts receivable – Prior to granting credit, we evaluate each customer, taking into consideration the customer's financial condition, payment experience and credit information. After credit is granted, we actively monitor the customer's financial condition and applicable business news;
- Pension assets – We have retained outside advisors to assist in the management of the assets in our pension plans. In making investment decisions, we utilize an established risk management protocol that focuses on protection of the plan assets against downside risk. We ensure that investments within these plans provide appropriate diversification, the investments are monitored by investment teams, and portfolio managers adhere to the established investment policies. We believe the plan assets are subject to appropriate investment policies and controls; and
- Insurance – We monitor our insurance providers to ensure they have acceptable financial ratings. We have not identified any concerns in this regard based upon our reviews.

Economic Risk

Economic risk represents the possibility of loss resulting from economic instability in certain areas of the world or downturns in markets in which we operate. We sell a broad range of products that provide thermal solutions to customers operating primarily in the automotive, commercial vehicle, off-highway, and commercial, industrial, and building HVAC&R markets. We operate in diversified markets as a strategy for offsetting the risk associated with a downturn in any of the markets we serve. However, risk associated with market downturns is still present.

We monitor economic conditions in the U.S. and abroad. As we expand our global presence, we also encounter risks imposed by potential trade restrictions, including tariffs, embargoes, and the like. We continue to pursue non-speculative opportunities to mitigate these economic risks, and capitalize, when possible, on changing market conditions.

Table of Contents

We pursue new market opportunities after careful consideration of the potential associated risks and benefits. Successes in new markets are dependent upon our ability to commercialize our investments. Current examples of new and emerging markets for us include those related to electric vehicles, coils and coolers in certain markets, and coatings. Our investment in these areas is subject to the risks associated with technological success, customer and market acceptance, and our ability to meet the demands of our customers as these markets grow.

In an effort to manage and reduce our costs, we have been consolidating our supply base. As a result, we are dependent upon limited sources of supply for certain components used in the manufacture of our products, including aluminum, copper, steel and stainless steel (nickel). We are exposed to the risk of suppliers of certain raw materials not being able to meet strong customer demand (including the potential effects of trade laws and tariffs), as they may not increase their output capacity as quickly as customers increase their orders, and of increased prices being charged by raw material suppliers.

In addition, we purchase parts from suppliers that use our tooling to create the parts. In most instances, and for financial reasons, we do not have duplicate tooling for the manufacture of the purchased parts. As a result, we are exposed to the risk of a supplier being unable to provide the quantity or quality of parts that we require. Even in situations where suppliers are manufacturing parts without the use of our tooling, we face the challenge of obtaining consistently high-quality parts from suppliers that are financially stable. We utilize a supplier risk management program that leverages internal and third-party tools to identify and mitigate higher-risk supplier situations.

In addition to the above risks on the supply side, we are also exposed to risks associated with demands by our customers for decreases in the price of our products. We attempt to offset this risk with firm agreements with our customers whenever possible, but these agreements sometimes contain provisions for future price reductions. In addition, customers occasionally link price reductions to future program awards, and we must assess the overall implications of such requests on a case-by-case basis.

Hedging and Foreign Currency Forward Contracts

We use derivative financial instruments as a tool to manage certain financial risks. We prohibit the use of leveraged derivatives.

Commodity derivatives: From time to time, we enter into over-the-counter forward contracts related to forecasted purchases of aluminum and copper. Our strategy is to reduce our exposure to changing market prices of these commodities. In fiscal 2018, we designated certain commodity forward contracts as cash flow hedges for accounting purposes. Accordingly, for these designated hedges, we record unrealized gains and losses related to the change in the fair value of the contracts in other comprehensive income (loss) within shareholders' equity and subsequently recognize the gains and losses within cost of sales as the underlying inventory is sold. In fiscal 2017 and 2016, we did not designate commodity forward contracts for hedge accounting. Accordingly, unrealized gains and losses on these contracts have been recorded within cost of sales. In fiscal 2018, 2017 and 2016, net gains and losses related to commodity forward contracts were less than $1 million in each year.

Foreign currency forward contracts: We use derivative financial instruments in a limited way to mitigate foreign currency exchange risk. We periodically enter into foreign currency forward contracts to hedge specific foreign currency-denominated assets and liabilities as well as forecasted transactions. We have designated certain hedges of forecasted transactions as cash flow hedges for accounting purposes. Accordingly, for these designated hedges, we record unrealized gains and losses related to the change in the fair value of the contracts in other comprehensive income (loss) within shareholders' equity and subsequently recognize the gains and losses as a component of earnings at the same time and in the same financial statement line item that the underlying transactions impact earnings. We have not designated forward contracts related to foreign currency-denominated assets and liabilities as hedges. Accordingly, for these non-designated contracts, we record unrealized gains and losses related to the change in the fair value of the contracts in other income and expense. Gains and losses on these non-designated foreign currency forward contracts are offset by foreign currency gains and losses associated with the related assets and liabilities.

Counterparty risks: We manage counterparty risks by ensuring that counterparties to derivative instruments have credit ratings acceptable to us. At March 31, 2018, all counterparties had a sufficient long-term credit rating.

Table of Contents

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

MODINE MANUFACTURING COMPANY
CONSOLIDATED STATEMENTS OF OPERATIONS
For the years ended March 31, 2018, 2017 and 2016
(In millions, except per share amounts)

	2018	2017	2016
Net sales	$2,103.1	$1,503.0	$1,352.5
Cost of sales	1,746.6	1,248.6	1,118.9
Gross profit	356.5	254.4	233.6
Selling, general and administrative expenses	245.8	203.2	170.0
Restructuring expenses	16.0	10.9	16.6
Impairment charges	2.5	-	9.9
Gain on sale of facilities	-	(2.0)	-
Operating income	92.2	42.3	37.1
Interest expense	(25.6)	(17.2)	(11.1)
Other expense - net	(3.3)	(4.3)	(35.9)
Earnings (loss) before income taxes	63.3	20.8	(9.9)
(Provision) benefit for income taxes	(39.5)	(5.9)	8.9
Net earnings (loss)	23.8	14.9	(1.0)
Net earnings attributable to noncontrolling interest	(1.6)	(0.7)	(0.6)
Net earnings (loss) attributable to Modine	$22.2	$14.2	$(1.6)
Net earnings (loss) per share attributable to Modine shareholders:			
Basic	$0.44	$0.29	$(0.03)
Diluted	$0.43	$0.29	$(0.03)
Weighted-average shares outstanding:			
Basic	49.9	47.8	47.3
Diluted	50.9	48.3	47.3

The notes to consolidated financial statements are an integral part of these statements.

Table of Contents

MODINE MANUFACTURING COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
For the years ended March 31, 2018, 2017 and 2016
(In millions)

	2018	2017	2016
Net earnings (loss)	$23.8	$14.9	$(1.0)
Other comprehensive income (loss):			
Foreign currency translation	41.8	(10.8)	4.6
Defined benefit plans, net of income taxes of ($0.2), $1.7 and $11.8 million	0.1	3.2	19.7
Cash flow hedges, net of income taxes of $0.1, $0 and $0 million	0.1	-	-
Total other comprehensive income (loss)	42.0	(7.6)	24.3
Comprehensive income (loss)	65.8	7.3	23.3
Comprehensive income attributable to noncontrolling interest	(2.1)	(0.7)	(0.5)
Comprehensive income attributable to Modine	$63.7	$6.6	$22.8

The notes to consolidated financial statements are an integral part of these statements.

Table of Contents

MODINE MANUFACTURING COMPANY
CONSOLIDATED BALANCE SHEETS
March 31, 2018 and 2017
(In millions, except per share amounts)

	2018	2017
ASSETS		
Cash and cash equivalents	$39.3	$34.2
Trade accounts receivable – net	342.4	295.2
Inventories	191.3	168.5
Other current assets	70.1	55.4
Total current assets	643.1	553.3
Property, plant and equipment – net	504.3	459.0
Intangible assets – net	129.9	134.1
Goodwill	173.8	165.1
Deferred income taxes	96.9	108.4
Other noncurrent assets	25.4	29.6
Total assets	$1,573.4	$1,449.5
LIABILITIES AND SHAREHOLDERS' EQUITY		
Short-term debt	$53.2	$73.4
Long-term debt – current portion	39.9	31.8
Accounts payable	277.9	230.3
Accrued compensation and employee benefits	97.3	74.8
Other current liabilities	47.2	45.1
Total current liabilities	515.5	455.4
Long-term debt	386.3	405.7
Deferred income taxes	9.9	9.7
Pensions	109.6	119.4
Other noncurrent liabilities	53.6	38.1
Total liabilities	1,074.9	1,028.3
Commitments and contingencies (see Note 18)		
Shareholders' equity:		
Preferred stock, $0.025 par value, authorized 16.0 million shares, issued - none	-	-
Common stock, $0.625 par value, authorized 80.0 million shares, issued 52.3 million and 51.8 million shares	32.7	32.4
Additional paid-in capital	229.9	216.4
Retained earnings	394.9	372.4
Accumulated other comprehensive loss	(140.3)	(181.8)
Treasury stock, at cost, 1.8 million and 1.7 million shares	(27.1)	(25.4)
Total Modine shareholders' equity	490.1	414.0
Noncontrolling interest	8.4	7.2
Total equity	498.5	421.2
Total liabilities and equity	$1,573.4	$1,449.5

The notes to consolidated financial statements are an integral part of these statements.

Table of Contents

MODINE MANUFACTURING COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the years ended March 31, 2018, 2017 and 2016
(In millions)

	2018	2017	2016
Cash flows from operating activities:			
Net earnings (loss)	$23.8	$14.9	$(1.0)
Adjustments to reconcile net earnings (loss) to net cash provided by operating activities:			
Depreciation and amortization	76.7	58.3	50.2
Stock-based compensation expense	9.5	7.4	4.9
Impairment charges	2.5	-	9.9
Gain on sale of facilities	-	(2.0)	-
Deferred income taxes	12.1	(4.6)	(18.8)
Pension and postretirement expense	3.9	3.4	45.1
Insurance proceeds from Airedale fire	-	-	5.9
Other – net	5.1		