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, 2020

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 (State or other jurisdiction of incorporation or organization)	39-0482000 (I.R.S. Employer Identification No.)
1500 DeKoven Avenue, Racine, Wisconsin (Address of principal executive offices)	53403 (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	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.625 par value	MOD	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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Yes ☑ No ☐

Indicate by check mark 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 ☐ Smaller reporting company ☐

Emerging growth company ☐

If an emerging growth company, indicate by check mark 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 has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

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 $562 million based upon the market price of $11.37 per share on September 30, 2019, 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 50,823,290 at May 22, 2020.

An Exhibit Index appears at pages 82-85 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 2020 Annual Meeting of Shareholders	Part III of Form 10-K (Items 10, 11, 12, 13, 14)

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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, we 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 hold a competitive position in the marketplace as thermal management experts.

During fiscal 2020, we continued to employ our Strengthen, Diversify and Grow ("SDG") strategy in order to transform Modine into a more diversified industrial thermal-management company. We launched our SDG strategy over four years ago to establish a more global, product-based organizational structure and a strategic framework for our company. This strategic framework continues to provide benefits and has helped us to quickly implement cost-saving measures in response to lower end-market demand. We faced various challenges in fiscal 2020, including weakness in key vehicular end markets that began in the middle of our fiscal year. In addition, the outbreak of the novel coronavirus ("COVID-19"), which was declared a pandemic by the World Health Organization in March 2020, negatively impacted our business, beginning in the fourth quarter in our Asian and European markets. Both the vehicular market weakness and the impacts of the COVID-19 pandemic placed significant strain on our previously-announced evaluation of strategic alternatives for the automotive business within our Vehicular Thermal Solutions ("VTS") segment. As a result, we have paused this process until economic conditions improve. We remain committed, however, to exiting the automotive business in a manner that is in the best interest of our shareholders.

Globally, the COVID-19 pandemic has created significant volatility in the economy and end market demand, and has led to facility closures and supply chain disruption. Our business, along with many other businesses globally, is susceptible to impacts from COVID-19. We suspended production at certain manufacturing facilities in China, India, Italy, Spain, Germany, the Netherlands, Austria, Hungary, the U.S., Mexico and Brazil due to local government requirements or customer shutdowns and are operating other facilities in the U.S. and abroad at reduced capacity levels. Although the temporarily-closed facilities have since reopened, many are operating at a significantly reduced volume because of low customer demand. Beginning largely in April 2020 and in an effort to mitigate the negative impacts of COVID-19, we have taken actions, including, but not limited to, production staffing adjustments, furloughs, shortened work weeks, and temporary salary reductions at all levels of our organization. In addition, we are reducing operating and administrative expenses, including travel and entertainment expenditures, and lowering the annual compensation paid to the Board of Directors. We are also focused on reducing capital expenditures by delaying certain projects and the purchase of some program-related equipment and tooling. We are committed to the health and safety of our employees and have implemented steps to mitigate risk in our manufacturing operations and administrative offices. We are also committed to meeting our customers' needs and will work to overcome any supply chain disruptions that may arise to deliver quality products and services to our customers in a timely manner.

Our top five customers are in the automotive, commercial vehicle, and off-highway markets and our ten largest customers accounted for 45 percent of our fiscal 2020 sales. In fiscal 2020, 59 percent of our total sales were generated from customers outside of the U.S., with 52 percent of total sales generated by foreign operations and 7 percent generated by exports from the U.S. In fiscal 2019, 58 percent of our total sales were generated from customers outside of the U.S., with 52 percent of total sales generated by foreign operations and 6 percent generated by exports from the U.S. In fiscal 2018, 61 percent of our total sales were generated from customers outside of the U.S., with 56 percent of total sales generated by foreign operations and 5 percent generated by exports from the U.S.

During fiscal 2020, our consolidated net sales were $1.98 billion, an 11 percent decrease from $2.21 billion in fiscal 2019. This decrease was primarily due to lower sales in our VTS and Commercial and Industrial Solutions ("CIS") segments, partially offset by higher sales in our Building HVAC Systems ("BHVAC") segment. Our operating income of $38 million in fiscal 2020 decreased $72 million compared with the prior year, primarily due to lower earnings in the VTS and CIS segments and separation and project costs associated with our review of strategic alternatives for the automotive business, partially offset by higher earnings in the BHVAC segment.

In response to the lower market demand 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 restructuring expenses of $12 million and $10 million during fiscal 2020 and 2019, respectively, primarily related to severance expenses resulting from targeted headcount reductions.

Markets

We sell products to multiple end markets. The following is a summary of our primary end markets, categorized as a percentage of our net sales:

	Fiscal 2020	Fiscal 2019
Commercial HVAC&R	32%	30%
Automotive	26%	25%
Commercial vehicle	16%	18%
Off-highway	13%	14%
Data center cooling	8%	8%
Industrial cooling	2%	2%
Other	3%	3%

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 have 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

Each of our operating segments is managed by a vice president and has separate financial results reviewed by our chief operating decision maker ("CODM.") These results are used by management in evaluating the performance of each business segment and in making decisions on the allocation of resources amongst our various businesses. Financial information for our operating segments is included in Note 22 of the Notes to Consolidated Financial Statements.

Effective April 1, 2020, we began managing our automotive business separate from the VTS segment. We are managing the automotive business as a separate segment as we target the sale or eventual exit of the businesses in this segment. In light of the ongoing COVID-19 pandemic, we have paused this process, but we intend to resume once we determine that market conditions will support our effort to maximize the value of the automotive business. Beginning for fiscal 2021, we will report the financial results of the automotive business as the Automotive segment. The remaining portion of the previous VTS segment will be named the Heavy-Duty Equipment segment and will include the heavy-duty commercial vehicle and off-highway businesses.

Our Vehicular Business

Vehicular Thermal Solutions Segment

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, and South Korea) and as 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 following summarizes the primary markets served by our VTS segment:

Automotive

Market Overview – The global automotive markets declined during fiscal 2020. While we expect longer-term growth of the automotive market will be supported by the tightening of emissions standards, in-vehicle technology enhancements and growth in emerging markets, we expect the global automotive markets will experience declines in fiscal 2021. The COVID-19 pandemic is adversely impacting these markets; the duration and severity of the impacts of COVID-19 are currently uncertain.

We have seen increased development activity in the automotive market on electric and hybrid powertrains with global automotive OEMs, their powertrain suppliers, and a number of start-up companies specializing in electric vehicles. 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 we believe will remain the primary automotive powertrain for years to come.

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); and chillers and cooling plates for battery thermal management.

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

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

Commercial Vehicle

Market Overview – During fiscal 2020, the North American commercial vehicle markets experienced declines, the most severe of which was within the heavy-duty truck market. In South America, the commercial vehicle market was relatively flat in fiscal 2020. In Europe and India, the commercial vehicle market experienced slight declines in fiscal 2020. We expect the global commercial vehicle markets will decline in fiscal 2021. The COVID-19 pandemic has lowered customer demand in these markets; the duration and severity of the impacts of COVID-19 are currently uncertain.

Beyond the COVID-19 pandemic, 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, which are more comparable to Euro 6, in China and India. Global standardization would lead to further development opportunities for Modine. Additionally, truck and bus manufacturers are evaluating alternative powertrains and fuels, including electrification, waste heat recovery, and other technologies aimed at improving 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 are active in these developments with numerous customers, 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); and battery thermal management systems.

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

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

Off-Highway

Market Overview – The global off-highway markets experienced declines during fiscal 2020. In North America, production of U.S. agricultural, construction, and mining machinery decreased in fiscal 2020 compared with the prior year. In South America, the off-highway markets experienced modest growth in fiscal 2020. In Europe, construction and agricultural equipment markets experienced slight declines in fiscal 2020. In Asia, the excavator markets experienced moderate declines during fiscal 2020. We expect the global off-highway markets will decline in fiscal 2021. The COVID-19 pandemic has lowered customer demand in the off-highway markets; the duration and severity of the impacts of COVID-19 are currently uncertain.

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 markets served by our CIS segment experienced slight declines during fiscal 2020. We expect these markets will decline further in fiscal 2021. The COVID-19 pandemic is negatively impacting these markets; the duration and severity of the impacts of COVID-19 are currently uncertain.

Beyond the COVID-19 pandemic, trends influencing the primary CIS markets include refrigerant substitution and energy efficiency requirements, both of which are expected to benefit the commercial HVAC&R markets. We also expect that future increases in urbanization, changing food consumption trends and increases in global trade will drive investments in refrigeration infrastructure. Demand for efficient HVAC&R systems is driven by more stringent energy efficiency regulations and the need for higher-efficiency buildings. Regulatory bodies are imposing stricter guidelines aimed to reduce carbon footprint, which we expect will drive growth in the data center market, as data centers will need to adopt the latest precision cooling solutions. Lastly, we expect the anticipated reduction in Chinese government investments will negatively impact the industrial cooling market in China.

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 Systems Segment

Market Overview –The North American heating and ventilation market experienced moderate to relatively strong growth in fiscal 2020 due to overall favorable economic conditions and an increased demand from school systems. Our businesses in the United Kingdom ("U.K.") serve ventilating, air conditioning ("HVAC") and data center markets in the U.K., mainland Europe, the Middle East, Far East and Africa. In fiscal 2020, we saw strong growth within the colocation segment of data centers, offset slightly by a decline in comfort air conditioning markets largely attributable to the uncertainty of the withdrawal of the U.K. from the European Union ("Brexit.")

With the exception of the data center market, where we are seeing heightened demand in light of increasing reliance on virtual capabilities resulting from stay-at-home edicts, the COVID-19 pandemic is negatively impacting the primary markets served by the BHVAC segment. The duration and severity of the impacts of COVID-19 on these markets are currently uncertain. Once markets return to a more normal state, we expect commercial investment, construction market activity, and energy efficiency legislation to drive increased demand in the ventilation and air conditioning markets. We believe increased clarity regarding Brexit will begin benefitting the U.K. markets. In addition, we expect an ever-increasing reliance on digital technologies, specifically colocation and cloud usage, to drive growth in the data center markets in the U.K. and Europe. We also expect that 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 few years, 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 for existing plant equipment and new building management controls and systems.

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

Primary Competitors – Lennox International Inc (ADP).; Reznor (Nortek Global HVAC); Sterling (Mestek Inc.); 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; Greenheck (Greenheck and Valent); 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	
		Germany	South Korea	
		Hungary		
		Italy		
		Netherlands		
		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.

Exports

Export sales from the U.S. to foreign countries, as a percentage of consolidated net sales, were 7 percent, 6 percent and 5 percent in fiscal 2020, 2019, and 2018, 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.

Customer Dependence

Our ten largest customers, some of which are conglomerates or otherwise affiliated, accounted for 45 percent of our consolidated net sales in fiscal 2020. In fiscal 2020, Daimler AG accounted for 10 percent or more of our sales. In fiscal 2019 and 2018, Daimler AG and Volkswagen AG each accounted for 10 percent or more of our sales.

Our top customers operate primarily in the automotive, commercial vehicle, off-highway, data center cooling 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; FCA N.V. (including Chrysler, CNH, Fiat, Iveco, and VM Motori); Ingersoll Rand Inc. (Trane); 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 (more than 10 percent of CIS segment sales in fiscal 2020) 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 2021 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 concentrated between two global suppliers, with other suppliers qualified and supplying lesser amounts to mitigate risk. We typically 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 suppliers on a monthly basis and our major fabricated component suppliers on a quarterly basis. When possible, we have included provisions within our long-term customer contracts which allow us to adjust customer prices, on a prospective basis, based upon increases and decreases in the cost of key raw materials. When applicable, however, these contract provisions 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 until 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 2,500 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 $60 million, $70 million, and $66 million in fiscal 2020, 2019, and 2018, respectively. As a percentage of our consolidated net sales, we have spent approximately 3 percent on R&D in each of the last three years. 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.

Quality Improvement

Globally, we drive quality improvement by maintaining the Global Modine Management System, applying the Modine Operating System, and executing the Modine Quality Strategy.

Through our integrated and process-oriented Global Modine Management System, the majority of our manufacturing facilities and administrative offices are registered to ISO 9001:20015 or IATF 16949:2016 standards, helping to ensure that our customers receive high quality products and services. Modine puts emphasis on monitoring process performance and adherence to meet rising customer expectations for performance, quality and service.

Our Global Modine Management System operates within the context of our Modine Operating System, 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 our company by utilizing the principles, processes and behaviors that are core to these systems.

To ensure future quality, we continue to execute the Modine Quality Strategy, which focuses on people, process, performance, tools and methods and the Global Modine Management System.

Environmental, Health and Safety Matters

We are committed to preventing pollution, eliminating waste and reducing environmental risks and employ waste management programs to advance our environmental stewardship and minimize our environmental footprint. The majority of our facilities maintain Environmental Management System (“EMS”) certification to the international ISO14001 standard through independent third-party audits.

We are focused on reducing both our energy and water usage and have empowered each of our global facilities to create and carry out action plans that will contribute to our company-wide reduction goals. Examples of steps being taken to meet these goals include the installation of more efficient LED lighting systems, the replacement of inefficient boilers and air compressors, improved building HVAC management systems, increased industrial water recycling, and the installation of water-saving faucets.

We are committed to continuously driving energy efficiency across our product portfolio, reflecting our sense of environmental responsibility. Our VTS segment products include EGR, oil and charge-air coolers, radiators, air conditioning condensers, battery and oil cooling systems, and charge-air coolers for cars, trucks, motorcycles, and specialty vehicles. These products allow both internal combustion and electric vehicle systems to run at optimal temperatures, which promotes better fuel efficiency, lower emissions, and improved vehicle lifespans. We continue to focus on component design and development to improve fuel efficiency and reduce overall energy consumption, while still providing the vehicle performance that our customers expect. In our CIS and BHVAC segments, we are shifting our product portfolios toward lower-emission propellants and refrigerants that greatly reduce the environmental impact and enhance energy efficiency for our customers’ heating and cooling systems. In addition, in our BHVAC segment, we are also focusing on reducing energy use by recycling waste heat produced from air conditioning systems.

Obligations for remedial activities may arise at our facilities due to past practices, or as a result of a property purchase or sale. These obligations 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 $18 million at March 31, 2020.

We have consistently out-performed the private-industry Recordable Incident Rate (“RIR” as defined by OSHA) average for the manufacturing sector, which was 3.4 in 2018. During fiscal 2020, we recorded an RIR of 1.14, which was lower than our prior year rate of 1.29. Our behavior-based safety program proactively seeks to correct at-risk behaviors while positively reinforcing safe behaviors.

The health and safety of our employees is paramount to us. In response to the COVID-19 pandemic, we have taken steps at all of our global locations to limit the risk of exposure. These actions have included increasing the spacing between work stations, rotating or splitting shifts to reduce the number of employees in the plant, providing additional personal protective equipment as necessary, removing chairs from cafeterias to ensure social distancing, providing training on personal hygiene best practices, implementing additional cleansing and sanitizing processes in critical areas, and establishing programs allowing employees to work from home where possible, which are helping to protect both those employees who are working remotely and those who remain in our facilities.

Employees

We employed approximately 11,300 persons worldwide as of March 31, 2020.

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 generally expect sales volume within our CIS segment to be higher during our first and second 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 VTS and CIS segments on an as-ordered basis, which makes large inventories of finished products unnecessary. In Brazil, within our VTS segment, we maintain aftermarket product inventory in order to timely meet customer needs in the Brazilian automotive and commercial vehicle aftermarkets. In our BHVAC segment, we maintain varying levels of finished goods inventory due to seasonal demand and certain sales programs. We have not experienced 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.

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 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, while preserving and enhancing shareholder 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

COVID-19 Pandemic and Future Public Health Crises

The ongoing COVID-19 pandemic, and any future widespread outbreak of an illness or other public health threat, could adversely affect our business, financial position, results of operations and cash flows.

In March 2020, the World Health Organization declared the outbreak of the novel coronavirus, COVID-19, a pandemic. The spread of COVID-19 and the resulting work and travel restrictions, including international border closings, have disrupted, and may continue to disrupt, global supply chains and have negatively impacted the global economy. As a result of this pandemic, we have experienced significant impacts on our operations. We suspended production at many of our manufacturing facilities around the world due to customer shutdowns or local government requirements. Although the temporarily-closed facilities have since reopened, we are operating many facilities at reduced capacity levels in response to decreased customer orders.

Beginning largely in April 2020 and in an effort to mitigate the negative impacts of COVID-19, we have taken actions, including, but not limited to, production staffing adjustments, furloughs, shortened work weeks, and temporary salary reductions at all levels of our organization. Our business operations could be further affected if any of our key management or leadership personnel are incapacitated or if a significant portion of our workforce is unable to work effectively due to illness, quarantines, government actions or similar pandemic-related impediments. The COVID-19 threat has caused us to modify certain business practices (including employee work locations and limitations on physical participation in meetings) in ways that could be detrimental to our business, including, among others, working remotely and associated cybersecurity risks.

At this time, we are unable to quantify or predict the ultimate impacts on our business, the full extent of which will depend largely on future developments and the length and severity of the pandemic, all of which are unpredictable and outside of our control. If we, our suppliers, or our customers experience further shutdowns or other significant business disruptions, our ability to conduct business in the manner and on the timelines presently planned could be materially and negatively impacted, which could have a material adverse effect on our business, financial position, results of operations and cash flows.

Likewise, an outbreak of a disease or public health threat in the future could create economic and financial disruptions and adversely affect our businesses around the world. Potential impacts of the COVID-19 pandemic and any future epidemics, pandemics, or other health crises include, but are not limited to, (i) staffing shortages if portions of our workforce are unable to work effectively due to illness, quarantines, government actions, facility closures, or other restrictions; (ii) short- or long-term disruptions in our supply chain and our ability to deliver products to our customers; (iii) deterioration in the markets that we or our customers operate in, which may result in lower sales or a lack in the ability to pay; and (iv) significant volatility or negative pressure in the financial markets, which could adversely affect our access to capital and/or financing.

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 OEM 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. In addition, we must balance our ongoing need to reduce operating costs against any potential compromise in the high quality of our products and our ability to provide the highest standard of service to our customers. 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.

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

Increases in the costs of raw materials and other purchased component inventory, 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 provisions within our long-term customer contracts which allow us to adjust customer prices, on a prospective basis, based upon increases and decreases in the cost of key raw materials. However, where these contract provisions are applicable, there can often be a three-month to one-year lag until the time of the price adjustment. To further mitigate our exposure, from time to time we 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 willingness 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 constraints, financial instability, public health crises, such as pandemics and epidemics, including the COVID-19 pandemic, or other circumstances experienced by our suppliers could result in shortages or delays in their supply of product to us, or a significant price increase resulting in our need to resource. 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.

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 businesses, 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 (more than 10 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 in these sales levels, 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 or disruptions 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, government-imposed restrictions relating to health crises or other unusual events, 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.

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.

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. 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 could have an adverse effect on our results of operations and financial condition.

B. OPERATIONAL RISKS

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, and Asia. In fiscal 2020, 52 percent of our sales were generated 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, public health crises, including the ongoing COVID-19 pandemic, unreliable intellectual property protection and legal systems, insufficient infrastructures, social unrest, political instability and disputes (including, for example, the uncertainty related to the withdrawal of the United Kingdom from the European Union, commonly referred to as “Brexit”), 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 either manufacture products, such as Mexico, or buy raw materials, such as China, 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 to the extent that we are alleged or found to be in violation, whether intentional or unintentional. 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.

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.

Challenges of Maintaining a Competitive Cost Structure

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

We have engaged in various restructuring activities in our VTS, CIS and BHVAC segments in order to optimize our manufacturing footprint and cost structure. These restructuring activities have included targeted headcount reductions that support our objective of reducing operational and SG&A cost structures and the consolidation and/or closure of manufacturing facilities in North America and Europe. 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 Program 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, particularly within our VTS segment, we must appropriately manage these launches and deploy our operational and administrative resources to take advantage of the resulting increase in our business. If we do not successfully launch new 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 operating inefficiencies or asset impairment charges, which could adversely affect our results of operations.

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 (IT) Systems

We may be adversely affected by a substantial disruption in, or material breach of, our IT systems.

We are dependent upon our IT infrastructure, including network, hardware, and software systems, to conduct our business. Despite network and other cybersecurity measures we have in place, our IT systems could be disrupted or we could experience a security breach from computer viruses, break-ins or similar disruptions. A substantial disruption in our IT systems for a prolonged time period, or a material breach of our IT systems, could result in delays in receiving inventory and supplies or filling customer orders, and/or the release of otherwise confidential information, including personal information that is protected by the General Data Protection Regulation, 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. This impact may be heightened by the increased disbursement of our workforce resulting from our own and from government efforts to mitigate the spread of the COVID-19 pandemic. 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.

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.

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, financial condition and reputation.

Attracting and Retaining Talent

Our continued success is dependent on being able to attract, develop and retain qualified personnel.

Our ability to sustain and grow our business requires us to hire, develop, and retain skilled and diverse personnel in managerial, leadership and administrative functions. We depend significantly on the engagement of our employees and their skills, experience and industry knowledge to support our objectives and initiatives. Difficulty attracting, developing, and retaining qualified personnel, particularly in light of tightening global labor markets, could adversely affect our business and results of operations.

C. STRATEGIC RISKS

Strategic Business Evaluation

The optimization of our VTS segment's future profitability depends, in part, upon the success of our evaluation of strategic alternatives for our automotive business.

We previously announced our evaluation of strategic alternatives for our automotive business within our VTS segment. While we have paused this process in light of the COVD-19 pandemic, we are committed to exiting this business in a manner that is in the best interest of our shareholders and will resume the process when economic conditions improve. It is possible that our exit strategy may ultimately include a combination of both selling and winding-down or closing portions of the automotive business. While we have spent considerable resources working towards the separation of the automotive business and preparing for a potential sale, there can be no assurance that the evaluation will result in a consummated transaction. If our evaluation process does not result in the successful consummation of a strategic alternative, or if we are otherwise unable through such consummation to realize our goal for the automotive business, we may not be able to optimize the profitability of our VTS segment, which could adversely affect our results of operations and financial condition.

Growth Strategies

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

We expect to continue to pursue acquisitions in "industrial" markets. 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 and execute on organic opportunities 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, 2020, we had total outstanding indebtedness of $482 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.

Our credit and Senior Note agreements contain financial covenants that, among other things, require us to maintain a minimum interest coverage ratio and impose a maximum leverage ratio. Although we recently amended these agreements to provide additional flexibility in light of risks and uncertainties resulting from the COVID-19 pandemic, our failure to comply with debt covenants could result in an event of default, which, if not cured or waived, could result in us being required to repay these borrowings before their due date. If we are forced to refinance these borrowings on less favorable terms, our results of operations and financial condition could be adversely affected by increased costs and interest rates.

The planned phase out of the London Interbank Offer Rate ("LIBOR") could have an adverse effect on our financial condition and access to capital.

Our revolving credit facility and current term loans utilize LIBOR to set the interest rate on outstanding borrowings. The United Kingdom's Financial Conduct Authority announced that after 2021 it would no longer persuade or compel panel banks to submit the rates required to calculate LIBOR. Currently, there is no definitive information or consensus regarding the future utilization of LIBOR or alternative reference rates. As a result, it is not possible to predict the effect of these changes, other reforms, or the establishment of alternative reference rates. Should a suitable replacement for LIBOR not be available, however, the rates under our variable rate indebtedness could increase and access to capital could be limited.

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

Our defined benefit pension plans in the U.S. are frozen to new participants. Our funding policy 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 totaling $98 million. During fiscal 2021, we anticipate making funding contributions totaling $20 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 assumptions, 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.

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 $272 million at March 31, 2020. 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.

We use judgment in determining if an indication of impairment exists. For our annual goodwill impairment tests, we use significant estimates and assumptions, including revenue growth rates and operating profit margins to calculate estimated future cash flows, risk-adjusted discount rates, business trends and market conditions. We cannot predict the occurrence of future events or circumstances, including lower than forecasted revenues, market trends that fall below our current expectations, actions of key customers, increases in discount rates, and the continued economic uncertainty and impacts associated with the COVID-19 pandemic, which could adversely affect the carrying value of goodwill and intangible assets. 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.

As of March 31, 2020, our net deferred tax assets totaled $97 million. These deferred tax assets include, among others, net operating loss carryforwards and tax credit carryforwards that may be used in certain tax jurisdictions to offset future taxable income and reduce income taxes payable. Each quarter, we determine the probability that the deferred tax assets will be realized. This determination involves judgement and the use of significant estimates and assumptions, including expectations of future taxable income and tax planning strategies. Future events or circumstances, such as lower taxable income or unfavorable changes in the financial outlook of our operations in certain jurisdictions, could require us to establish further valuation allowances, which could have a material adverse effect on our results of operations and financial condition.

In addition, the subjectivity of or changes in tax laws and regulations in jurisdictions where we have significant operations could materially affect our results of operations and financial condition. We are also 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.

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, 2020. 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
VTS Segment			
North and South America			
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	375,000 sq. ft.	Manufacturing	Owned
Jefferson City, MO	202,000 sq. ft.	Manufacturing	162,000 Owned 40,000 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			
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
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			
Changzhou, China	257,000 sq. ft.	Manufacturing	Owned
Chennai, India	154,000 sq. ft.	Manufacturing	Owned
Yangzhou, China	96,000 sq. ft.	Manufacturing (Joint Venture)	Leased
Shanghai, China	80,000 sq. ft.	Manufacturing	Leased
Jincheon, South Korea	46,000 sq. ft.	Manufacturing (Joint Venture)	Leased

Location of Facility	Building Space	Primary Use	Owned or Leased
CIS Segment			
North America			
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
Juarez, Mexico	326,000 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
Ramos Arizpe, Mexico	59,000 sq. ft.	Manufacturing	Leased
Europe			
Pocenia, Italy	449,000 sq. ft.	Administrative, manufacturing & technology center	Owned
Guadalajara, Spain	482,000 sq. ft.	Manufacturing	Owned
Söderköping, Sweden	216,000 sq. ft.	Manufacturing	Owned
Amaro, Italy	196,000 sq. ft.	Manufacturing	Leased
Kötschach-Mauthen, Austria	195,000 sq. ft.	Manufacturing	Owned (closed)
San Vito, Italy	131,000 sq. ft.	Manufacturing	Owned
Sremska Mitrovica, Serbia	128,000 sq. ft.	Manufacturing	Leased
Padova, Italy	78,000 sq. ft.	Manufacturing	Leased
Asia			
Zhongshan, China	143,000 sq. ft.	Manufacturing	Leased
Wuxi, China	303,000 sq. ft.	Manufacturing	Leased
BHVAC Segment			
North America			
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
Europe			
Leeds, United Kingdom	247,000 sq. ft.	Administrative & manufacturing	Leased
Consett, United Kingdom	38,000 sq. ft.	Manufacturing	Owned
Consett, United Kingdom	20,000 sq. ft.	Manufacturing	Leased
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 20 of the Notes to Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS.

The following sets forth the name, age (as of March 31, 2020), recent business experience and certain other information relative to each executive officer of the Company.

Name	Age	Position
Brian J. Agen	51	Vice President, Human Resources (October 2012 – Present).
Scott L. Bowser	55	Vice President, Commercial and Industrial Solutions and Chief Operating Officer (September 2019 - Present); previously Vice President, Chief Operating Officer; Vice President, Global Operations; and Vice President of Asia and Global Procurement for the Company.
Thomas A. Burke	62	President and Chief Executive Officer (April 2008 – Present).
Joel T. Casterton	48	Vice President, Vehicular Thermal Solutions (January 2018 – Present); previously Director – Global Program Management & Quality for the Company.
Michael B. Lucareli	51	Vice President, Finance and Chief Financial Officer (October 2011 – Present).
Matthew J. McBurney	50	Vice President, Building HVAC and Corporate Strategy (November 2019 - Present); previously Vice President, Strategic Planning and Development; Vice President, Luvata Integration; and Vice President, Building HVAC for the Company.
Scott A. Miller	55	Vice President, Global Coils and Coolers (November 2019 – Present); previously Vice President, Building HVAC; Managing Director – Global Operations; and Operations Director of the Building HVAC and North America business units for the Company.
Sylvia A. Stein	53	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.

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 Ms. Stein, who joined in January 2018, whose business experience during the last five years is described 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.

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. As of March 31, 2020, shareholders of record numbered 2,282.

We did not pay dividends during fiscal 2020 or 2019. Under our credit 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 2021.

The following describes the Company's purchases of common stock during the fourth quarter of fiscal 2020:

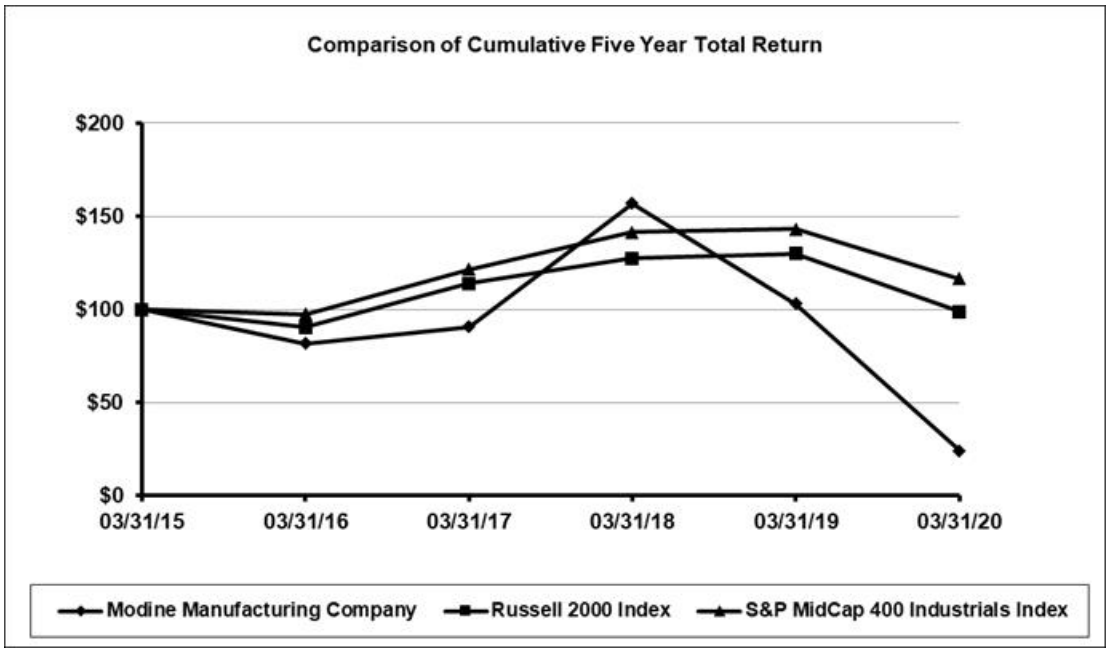
Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs (a)
January 1 – January 31, 2020	2,850 (b)	$7.28	———	$46,985,524
February 1 – February 29, 2020	16,948 (b)	$8.07	———	$46,985,524
March 1 – March 31, 2020	———	———	———	$46,985,524
Total	19,798 (b)	$7.95	———	

(a) Effective October 30, 2018, the Board of Directors approved a two-year, $50.0 million share repurchase program, which allows the Company to repurchase Modine common stock through solicited and unsolicited transactions in the open market or in privately-negotiated or other transactions, at such times and prices and upon such other terms as the authorized officers of the Company deem appropriate.

(b) Consists of shares delivered back to the Company by employees and/or directors to satisfy tax withholding obligations that arise upon the vesting of stock awards. The Company, pursuant to its equity compensation plans, gives participants the opportunity to turn back to the Company the number of shares from the award sufficient to satisfy tax withholding obligations that arise upon the termination of restrictions. These shares are held as treasury shares.

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.



		Indexed Returns				
	Initial Investment	Years ended March 31,				
Company / Index	March 31, 2015	2016	2017	2018	2019	2020
Modine Manufacturing Company	$ 100	$ 81.74	$ 90.57	$ 157.02	$ 102.97	$ 24.13
Russell 2000 Index	100	90.24	113.90	127.33	129.94	98.77
S&P MidCap 400 Industrials Index	100	97.44	121.41	141.39	143.14	116.40

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, 2020	2019	2018	2017	2016
Net sales	$ 1,976	$ 2,213	$ 2,103	$ 1,503	$ 1,353
Operating income	38	110	92	42	37
Net (loss) earnings	(2)	86	24	15	(1)
Total assets	1,536	1,538	1,573	1,450	921
Long-term debt - excluding current portion	452	382	407	446	126
Net cash provided by operating activities	58	103	124	42	72
Expenditures for property, plant and equipment	71	74	71	64	63
Net (loss) earnings per share attributable to Modine shareholders:					
Basic	$ (0.04)	$ 1.67	$ 0.44	$ 0.29	$ (0.03)
Diluted	(0.04)	1.65	0.43	0.29	(0.03)

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. Since the date of acquisition, we've consolidated financial results from this business within our CIS segment. During fiscal 2020, 2019, 2018, and 2017, CIS segment net sales were $624 million, $708 million, $676 million, and $232 million, 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.

- During fiscal 2020, 2019, 2018, 2017, and 2016, we incurred $12 million, $10 million, $16 million, $11 million, and $17 million, respectively, of restructuring expenses. See Note 5 of the Notes to Consolidated Financial Statements for additional information.

- During fiscal 2020, 2018, and 2016, we recorded asset impairment charges totaling $9 million, $3 million and $10 million, respectively. See Notes 5, 13, and 14 of the Notes to Consolidated Financial Statements for additional information.

- During fiscal 2020 and 2019, the Company recorded $39 million and $7 million, respectively, of costs directly associated with its review of strategic alternatives for the VTS segment's automotive business, including costs to separate and prepare the business for a potential sale.

- During fiscal 2018, we recorded provisional income tax charges totaling $38 million as a result of U.S. tax legislation enacted in December 2017 commonly referred to as the Tax Act. During fiscal 2019, we recorded income tax benefits totaling $22 million related to the Tax Act and the recognition of foreign tax credits. 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 associated with a voluntary lump-sum payout program offered to certain eligible former employees and a $10 million gain related to an insurance settlement for equipment losses associated with a fire at our Airedale manufacturing facility in the U.K in September 2013.

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 17 countries, and employ approximately 11,300 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

Fiscal 2020 brought challenges, including market weakness in key vehicular end markets and the COVID-19 pandemic, which negatively impacted our businesses, beginning in the fourth quarter in Asia and Europe. In response to these challenges, we have rapidly implemented cost-savings measures to mitigate the impacts of lower customer demand. These measures have included, but are not limited to, production staffing adjustments, furloughs, shortened work weeks, and temporary salary reductions at all levels of our organization. We are reducing operating and administrative expenses, including travel and entertainment expenditures, and lowering the annual compensation paid to the Board of Directors. We have also taken steps specifically aimed to preserve cash and maximize our liquidity. In addition, we are focused on reducing capital expenditures by delaying certain projects and the purchase of some program-related equipment and tooling.

Both the vehicular market weakness and the impacts of the COVID-19 pandemic during fiscal 2020 placed significant strain on our previously-announced evaluation of strategic alternatives for the automotive business. As a result, we have paused this process until economic conditions improve. We remain committed, however, to exiting the automotive business in a manner that is in the best interest of our shareholders.

As we steer our business through these uncertain times in light of the COVID-19 pandemic, we are focused on leveraging the advantages we have. We have made significant strides in becoming an industrial thermal management company and possess superior technology that we can apply to targeted end markets. We are confident in our Company's strong foundation, comprised of our effective leadership team, committed workforce, and engaged board of directors. Through our strong foundation, we believe we can create and maintain shareholder value even in these times of unprecedented uncertainty.

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.

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-to-three 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. We expect to continue to pursue organic- and external-growth opportunities, particularly to grow our global, market leading positions in our industrial businesses. As an example, we recently announced that we are changing how we will go to market to existing and potential new data center customers and are expanding our data center offerings into the North American market. We are bringing together the full systems capability and established roots of our BHVAC segment in the data center space with the global manufacturing expertise and customer relationships within CIS. We expect strong growth opportunities in the North American data center market as the industry is growing exponentially in order to keep up with the ever-increasing reliance on digital technologies.

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 executed restructuring activities in our VTS and CIS segments during recent years. We have also developed a single focus approach to the data center market by combining the resources and capabilities of our BHVAC and CIS teams. 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 2020 was based upon consolidated operating income growth and a cash flow margin metric. These performance goals drive alignment of management and shareholders' interests in both our earnings growth and cash flow 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 2020 through 2022 performance period are based upon a target three-year average annual revenue growth and a target three-year average consolidated cash flow return on invested capital.

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, 2020, we began managing our automotive business separate from the VTS segment as we target the sale or eventual exit of the automotive business. We will report financial results for the automotive segment beginning in the first quarter of fiscal 2021.

Vehicular Thermal Solutions (58 percent of fiscal 2020 net sales)

Our VTS segment provides powertrain and engine cooling products, including, but not limited to, radiators, charge air coolers, condensers, oil coolers, EGR coolers, and fuel coolers, to OEMs in the automotive, commercial vehicle, and off-highway markets in North America, South America, Europe, and Asia. In addition, our VTS segment also serves Brazil's automotive and commercial vehicle aftermarkets.

Sales volume in the VTS segment decreased during fiscal 2020, as compared with the prior year. In particular, sales to commercial vehicle and off-highway customers decreased significantly compared with the prior year, resulting from weakness in the global vehicular markets and the planned wind-down of certain commercial vehicle programs. In addition, to a lesser extent, sales volume decreased to automotive customers in fiscal 2020. During fiscal 2020, we recorded asset impairment charges totaling $8 million, primarily related to manufacturing facilities in Austria and Germany that are expected to be negatively impacted by planned wind downs of certain commercial vehicle and automotive programs.

We previously announced our evaluation of strategic alternatives for the automotive business. As a result of the widespread economic impacts of the COVID-19 pandemic, we have paused this process, yet we remain committed to exiting this business in a manner that is in the best interest of our shareholders. We intend to resume this process once we determine that market conditions will support our effort to maximize the value of our business. It is possible that our exit strategy may ultimately include a combination of both selling and winding-down or closing portions of the automotive business. We remain committed to executing on the best strategic alternative for the automotive business in order to both optimize our VTS segment's financial performance and maximize shareholder value.

Commercial and Industrial Solutions (31 percent of fiscal 2020 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, products for precision climate control for other applications such as data center cooling, 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.

During fiscal 2020, CIS segment sales volume decreased to both commercial HVAC&R and data center customers. The lower sales volume to commercial HVAC&R customers was largely attributable to general market weakness. In particular, the U.S. refrigeration transport market declined compared with the prior year. The lower data center sales primarily resulted from a significant decline in sales to an individual data center customer in fiscal 2020. The lower sales to this customer primarily resulted from the customer's temporary lull in additional investment, after strong capacity expansion in the prior year.

Looking ahead, while the duration and severity of the impacts of COVID-19 on the markets we serve are currently uncertain, our team is focused on improving financial results through manufacturing efficiencies, vertical integration projects and pricing strategies. We will continue to support our customers with innovative products, such as coils with smaller diameter tubing, to help them meet increasingly-stringent environmental requirements. Also, we have increased our product offerings that feature low Global Warming Potential refrigerants, which are more environmentally friendly than traditional refrigerants, and will continue to support the transition to natural refrigerants through our comprehensive line of commercial cooler products. We aim to capitalize on opportunities arising from energy and environmental regulations and believe we are well-positioned to be the partner of choice for our customers.

Building HVAC Systems (11 percent of fiscal 2020 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 U.K., 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 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 2020, sales increased in North America, primarily driven by increased sales of ventilation and heating products. These higher sales in North America were partially offset by lower sales in the U.K., primarily due to lower sales of air conditioning and ventilation products.

We are focused on being a leader in the development of sustainable HVAC solutions for our customers. As recently announced, we are targeting to expand our data center cooling business into the North American market. We have established roots in the data center space and plan to leverage our North American presence, including our manufacturing footprint and thermal management expertise, to deploy integrated data center cooling solutions to the U.S. market. We are seeing heightened demand in the data center markets, particularly in light of the increasing reliance on virtual capabilities resulting from stay-at-home edicts associated with the COVID-19 pandemic.

Consolidated Results of Operations

Fiscal 2020 net sales decreased $237 million, or 11 percent, from the prior year, primarily due to lower sales in our VTS and CIS operating segments, partially offset by higher sales in our BHVAC segment. Foreign currency exchange rate changes negatively impacted sales in fiscal 2020 by $46 million. Cost of sales decreased $179 million, or 10 percent, from last year, primarily due to lower sales volume. Gross profit decreased $58 million and gross margin declined 90 basis points to 15.6 percent. SG&A expenses increased $6 million, primarily due to separation and project costs associated with our review of strategic alternatives for the VTS segment's automotive business, which increased approximately $29 million compared with fiscal 2019. The higher separation and project costs were partially offset by lower-compensation related expenses. Operating income during fiscal 2020 decreased $72 million to $38 million, primarily due to lower gross profit and higher SG&A expenses.

The COVID-19 pandemic began negatively impacting our business beginning with our Asian and European markets in the fourth quarter of fiscal 2020. Both weakness in key vehicular markets and the impacts of the COVID-19 pandemic placed significant strain on our previously-announced evaluation of strategic alternatives for the automotive business within the VTS segment. As a result, we paused this process until economic conditions improve. We remain committed, however, to exiting the automotive business in a manner that is in the best interest of our shareholders. Once we resume the process, it is possible that our exit strategy may ultimately include a combination of both selling and winding-down or closing portions of the automotive business. We have spent considerable time and money separating the automotive business and preparing for a potential sale. We have dedicated resources to physically separate the automotive manufacturing operations, including resources for IT systems and separate business processes, and have also established new legal entities. We believe these resource investments are critical to exiting the automotive business. We remain committed to our strategy of becoming a diversified industrial company and executing on the best strategic alternative for the automotive business in order to both optimize our VTS segment's financial performance and maximize shareholder value.

As a result of the impacts of the COVID-19 pandemic, we suspended production at certain manufacturing facilities in China, India, Italy, Spain, Germany, the Netherlands, Austria, Hungary, the U.S., Mexico and Brazil due to local government requirements or customer shutdowns and are operating other facilities in the U.S. and abroad at reduced capacity levels. Although the temporarily-closed facilities have since reopened, many are operating at a significantly reduced volume because of low customer demand. Beginning largely in April 2020 and in an effort to mitigate the negative impacts of COVID-19 on our financial results, we have taken actions, including, but not limited to, production staffing adjustments, furloughs, shortened work weeks, and temporary salary reductions at all levels of our organization. In addition, we are reducing operating and administrative expenses, including travel and entertainment expenditures, and lowering the annual compensation paid to the Board of Directors. We are also focused on reducing capital expenditures by delaying certain projects and the purchase of some program-related equipment and tooling.

The following table presents our consolidated financial results on a comparative basis for fiscal years 2020 and 2019. A detailed comparison of our consolidated fiscal 2019 and 2018 financial results can be found in the Management's Discussion and Analysis of Financial Condition and Results of Operations section in the Company's 2019 Annual Report on Form 10-K filed with the SEC on May 23, 2019.

	Years ended March 31,			
	2020		2019	
(in millions)	$'s	% of sales	$'s	% of sales
Net sales	$ 1,976	100.0%	$ 2,213	100.0%
Cost of sales	1,668	84.4%	1,847	83.5%
Gross profit	308	15.6%	366	16.5%
Selling, general and administrative expenses	250	12.6%	244	11.0%
Restructuring expenses	12	0.6%	10	0.4%
Impairment charges	9	0.4%	-	-
(Gain) loss on sale of assets	(1)	-	2	0.1%
Operating income	38	1.9%	110	5.0%
Interest expense	(23)	-1.1%	(25)	-1.1%
Other expense - net	(5)	-0.2%	(4)	-0.2%
Earnings before income taxes	10	0.5%	81	3.7%
(Provision) benefit for income taxes	(12)	-0.6%	5	0.2%
Net (loss) earnings	$ (2)	-0.1%	$ 86	3.9%

Fiscal 2020 net sales of $1,976 million were $237 million, or 11 percent, lower than the prior year, primarily due to lower sales in our VTS and CIS segments and a $46 million unfavorable impact of foreign currency exchange rate changes, partially offset by higher sales in our BHVAC segment. Sales decreased $175 million and $84 million in our VTS and CIS segments, respectively. Sales increased $9 million in our BHVAC segment.

Fiscal 2020 cost of sales of $1,668 million decreased $179 million, or 10 percent, primarily due to lower sales volume and a $39 million favorable impact of foreign currency exchange rate changes. As a percentage of sales, cost of sales increased 90 basis points to 84.4 percent and was negatively impacted by approximately 80 basis points due to higher labor and inflationary costs and, to a lesser extent, by sales mix. These negative impacts were partially offset by favorable material costs, which impacted costs of sales by approximately 30 basis points. The favorable material costs primarily resulted from lower commodity pricing, which more than offset the negative impacts of tariffs. In addition, we recorded $3 million of costs at Corporate for program and equipment transfers associated with the separation of the VTS segment's automotive business in preparation for a potential sale.

As a result of lower sales and higher cost of sales as a percentage of sales, fiscal 2020 gross profit decreased $58 million and gross margin declined 90 basis points to 15.6 percent.

Fiscal 2020 SG&A expenses increased $6 million. The increase in SG&A was primarily due to separation and project costs recorded at Corporate associated with our review of strategic alternatives for the VTS segment's automotive business, which increased approximately $29 million. This increase was partially offset by lower compensation-related expenses, which decreased approximately $13 million, lower environmental charges related to previously-owned manufacturing facilities in the U.S., which decreased approximately $3 million, and a $4 million favorable impact from foreign currency exchange rate changes.

Restructuring expenses totaled $12 million during fiscal 2020 and increased $2 million compared with the prior year. The fiscal 2020 restructuring expenses primarily consisted of severance expenses related to targeted headcount reductions in the VTS segment and equipment transfer and plant consolidation costs in the CIS segment. The fiscal 2020 headcount reductions were in response to lower market demand and in support of our objective to reduce operational and SG&A cost structures. During fiscal 2021, we approved headcount reductions in the VTS and CIS segments and, as a result, we expect to record approximately $4 million of severance expenses during the first quarter of fiscal 2021.

During fiscal 2020, we recorded impairment charges totaling $9 million, primarily related to two manufacturing facilities in the VTS segment.

Operating income of $38 million during fiscal 2020 decreased $72 million compared with the prior year. This decrease was primarily due to an increase of $32 million of separation and project costs associated with our review of strategic alternatives for our automotive business and lower earnings in our VTS and CIS segments, which decreased $37 million and $20 million, respectively, partially offset by higher earnings in our BHVAC segment, which increased $9 million.

The provision for income taxes was $12 million in fiscal 2020, compared with a benefit for income taxes of $5 million in fiscal 2019. The $17 million change was primarily due to the absence of income tax benefits totaling $25 million recorded in the prior year and income tax charges totaling $10 million in the current year, partially offset by lower operating earnings in fiscal 2020. The $25 million of income tax benefits recorded in fiscal 2019 related to the recognition of tax assets for foreign tax credits and a manufacturing deduction in the U.S. and our accounting for the Tax Act. The $10 million of income tax charges in fiscal 2020 were comprised of net charges totaling $7 million resulting from adjustments of valuation allowances on certain deferred tax assets in the U.S. and in a foreign jurisdiction and $3 million associated with legal entity restructuring in preparation for a potential sale of our automotive business. See Note 7 of the Notes to Consolidated Financial Statements for additional information.

Segment Results of Operations

A detailed comparison of our segment financial results for fiscal 2019 and 2018 can be found in the Management's Discussion and Analysis of Financial Condition and Results of Operations section in the Company's 2019 Annual Report on Form 10-K filed with the SEC on May 23, 2019.

Effective April 1, 2020, we began managing our automotive business separate from the other businesses within the VTS segment. We are managing the automotive business as a separate segment as we target the sale or eventual exit of the automotive businesses. Beginning for fiscal 2021, we will report the financial results for the automotive business as the Automotive segment. The remaining portion of the previous VTS segment will be named the Heavy-Duty Equipment segment and will include the heavy-duty commercial vehicle and off-highway businesses.

VTS

	Years ended March 31,			
	2020		2019	
(in millions)	$'s	% of sales	$'s	% of sales
Net sales	$ 1,177	100.0%	$ 1,352	100.0%
Cost of sales	1,032	87.7%	1,165	86.2%
Gross profit	145	12.3%	187	13.8%
Selling, general and administrative expenses	100	8.5%	113	8.3%
Restructuring expenses	10	0.8%	9	0.7%
Impairment charges	8	0.7%	-	-
Gain on sale of assets	(1)	-0.1%	-	-
Operating income	$ 28	2.3%	$ 65	4.8%

VTS net sales decreased $175 million, or 13 percent, in fiscal 2020 compared with the prior year, primarily due to lower sales volume, a $31 million unfavorable impact of foreign currency exchange rate changes, and, to a lesser extent, unfavorable customer pricing largely resulting from contractually-scheduled price-downs. Sales to commercial vehicle, off-highway, and automotive customers decreased $64 million, $60 million, and $34 million, respectively. These sales declines largely result from weakness in global vehicular markets and the planned wind-down of certain commercial vehicle programs.

VTS cost of sales decreased $133 million, or 11 percent, primarily due to lower sales volume and a $26 million favorable impact of foreign currency exchange rate changes. As a percentage of sales, cost of sales increased 150 basis points to 87.7 percent. Beyond the unfavorable impact of the lower sales volume, higher labor and inflationary costs and unfavorable customer pricing negatively impacted cost of sales by approximately 90 basis points and 70 basis points, respectively. Higher depreciation costs, primarily resulting from recent manufacturing capacity expansion in China and Hungary, also negatively impacted cost of sales to a lesser extent. These negative impacts were partially offset by favorable material costs, which impacted cost of sales by approximately 30 basis points, improved operating efficiencies and cost savings from procurement initiatives. The favorable material costs primarily resulted from lower commodity pricing, which more than offset the negative impacts of tariffs.

As a result of the lower sales and higher cost of sales as a percentage of sales, gross profit decreased $42 million and gross margin declined 150 basis points to 12.3 percent.

VTS SG&A expenses decreased $13 million compared with the prior year yet increased 20 basis points as a percentage of sales. The decrease in SG&A expenses was primarily due to lower compensation-related expenses, which decreased approximately $9 million, lower environmental charges related to previously-owned manufacturing facilities in the U.S, which decreased approximately $3 million, and a $3 million favorable impact of foreign currency exchange rate changes.

Restructuring expenses during fiscal 2020 increased $1 million, primarily due to higher severance expenses resulting from targeted headcount reductions in Europe and in the Americas.

During fiscal 2020, we recorded asset impairment charges totaling $8 million, primarily related to manufacturing facilities in Austria and Germany to write down property and equipment assets to fair value. We anticipate future cash flows at these facilities will be negatively impacted by planned wind downs of certain commercial vehicle and automotive programs.

During fiscal 2020, we completed the sale of a previously-closed manufacturing facility in Germany and, as a result, recorded a gain of $1 million.

Operating income in fiscal 2020 decreased $37 million to $28 million, primarily due to lower gross profit and higher impairment charges, partially offset by lower SG&A expenses.

CIS

	Years ended March 31,			
	2020		2019	
(in millions)	$'s	% of sales	$'s	% of sales
Net sales	$ 624	100.0%	$ 708	100.0%
Cost of sales	531	85.1%	593	83.8%
Gross profit	93	14.9%	115	16.2%
Selling, general and administrative expenses	57	9.2%	61	8.6%
Restructuring expenses	2	0.3%	-	-
Impairment charges	1	0.1%	-	0.1%
Operating income	$ 33	5.3%	$ 53	7.5%

CIS net sales decreased $84 million, or 12 percent, in fiscal 2020 compared with the prior year, primarily due to lower sales volume and a $12 million unfavorable impact of foreign currency exchange rate changes. Sales to commercial HVAC&R and data center cooling customers decreased $43 million and $38 million, respectively.

CIS cost of sales decreased $62 million, or 10 percent, primarily due to lower sales volume and an $11 million favorable foreign currency exchange rate impact. As a percentage of sales, cost of sales increased 130 basis points to 85.1 percent, primarily due to the unfavorable impact of lower sales volume and unfavorable sales mix.

As a result of the lower sales and higher cost of sales as a percentage of sales, gross profit decreased $22 million and gross margin declined 130 basis points to 14.9 percent.

CIS SG&A expenses decreased $4 million compared with the prior year yet increased 60 basis points as a percentage of sales. The decrease in SG&A expenses was primarily due to lower compensation-related expenses, which decreased approximately $2 million, and the favorable impact of cost-control initiatives.

Restructuring expenses during fiscal 2020 increased $2 million, primarily due to higher equipment transfer and plant consolidation costs. We are currently transferring product lines to our manufacturing facility in Mexico in order to achieve operational improvements and organizational efficiencies.

During fiscal 2020, we recorded a $1 million asset impairment charge related to a previously-closed manufacturing facility in Austria.

Operating income in fiscal 2020 decreased $20 million to $33 million, primarily due to lower gross profit, partially offset by lower SG&A expenses.

BHVAC

	Years ended March 31,			
	2020		2019	
(in millions)	$'s	% of sales	$'s	% of sales
Net sales	$ 221	100.0%	$ 212	100.0%
Cost of sales	150	67.7%	149	70.1%
Gross profit	72	32.3%	63	29.9%
Selling, general and administrative expenses	35	15.8%	35	16.4%
Loss on sale of assets	-	-	2	0.8%
Operating income	$ 36	16.5%	$ 27	12.6%

BHVAC net sales increased $9 million, or 4 percent, in fiscal 2020 compared with the prior year, primarily due to higher sales in the U.S., which increased $14 million, partially offset by lower sales in the U.K., which decreased $5 million. The higher sales in the U.S. were primarily driven by the increased sales of ventilation and heating products. The lower sales in the U.K. were primarily due to lower sales of air conditioning and ventilation products and a $3 million unfavorable impact of foreign currency exchange rate changes, partially offset by higher data center sales.

BHVAC cost of sales increased $1 million, or less than 1 percent, in fiscal 2020. As a percentage of sales, cost of sales decreased 240 basis points to 67.7 percent, primarily due to favorable sales mix and favorable customer pricing.

As a result of the higher sales and lower cost of sales as a percentage of sales, gross profit increased $9 million and gross margin improved 240 basis points to 32.3 percent.

BHVAC SG&A expenses remained consistent with the prior year yet decreased 60 basis points as a percentage of sales.

During fiscal 2019, we sold our business in South Africa and, as a result, recorded a loss of $2 million.

Operating income in fiscal 2020 of $36 million increased $9 million, primarily due to higher gross profit.

Liquidity and Capital Resources

Our primary sources of liquidity are cash flow from operating activities, our cash and cash equivalents as of March 31, 2020 of $71 million, and an available borrowing capacity of $118 million under our revolving credit facility. Given our extensive international operations, approximately $31 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.

In response to lower customer demand resulting from the COVID-19 pandemic, we have taken actions to reduce operating expenses, conserve cash and maximize liquidity. These actions have included, but are not limited to, production staffing adjustments, furloughs, shortened work weeks, and temporary salary reductions at all levels of our organization. In addition, we are reducing operating and administrative expenses. Further, as described below, we are focused on reducing our capital expenditures and have executed amendments to our primary credit agreements to help ensure liquidity through financial covenant flexibility during the next two fiscal years. Together with anticipated cash flow from operations, we currently believe we have sufficient available cash and access to both committed and uncommitted credit facilities to adequately cover our funding needs on both a short- and long-term basis. However, we are continuing to monitor the impacts of COVID-19 on our business and the credit and financial markets.

The full extent of the impacts of COVID-19, which will largely depend on the length and severity of the pandemic, could have a material adverse effect on our business, results of operations, and cash flows and could adversely affect our access to capital and/or financing.

Net Cash Provided by Operating Activities

Net cash provided by operating activities in fiscal 2020 was $58 million, a decrease of $45 million from $103 million in the prior year. This decrease in operating cash flow was primarily due to lower operating earnings in the current year and payments for separation and project costs associated with our strategic review of alternatives for the VTS segment's automotive business, partially offset by favorable net changes in working capital. The favorable changes in working capital, as compared with the prior year, included lower employee benefit and incentive compensation payments.

Net cash provided by operating activities in fiscal 2019 was $103 million, a decrease of $21 million from $124 million in fiscal 2018. This decrease in operating cash flow primarily resulted from unfavorable changes in working capital, partially offset by the favorable impact of stronger earnings. The unfavorable changes in working capital, as compared with the prior year, included higher incentive compensation and other employee benefit payments and higher inventory levels associated with higher sales levels.

Capital Expenditures

Capital expenditures of $71 million during fiscal 2020 decreased $3 million compared with fiscal 2019, primarily due to lower capital investments in our VTS segment compared with the prior year, particularly in China and North America. Similar to prior years, our capital spending in fiscal 2020 primarily occurred in the VTS segment, which totaled $53 million, and included tooling and equipment purchases in conjunction with new and renewal programs with customers, as well as $7 million of capital investments associated with preparing our automotive business for a potential sale. In response to the economic impacts of the COVID-19 pandemic, we are taking steps to preserve our financial liquidity. As part of this initiative, we are focused on reducing our capital expenditures by delaying certain projects and the purchase of certain program-related equipment and tooling. At March 31, 2020, our capital expenditure commitments totaled $12 million and primarily consisted of commitments for tooling and equipment expenditures in support of new and renewal programs in the VTS segment.

Debt

Our total debt outstanding increased $33 million to $482 million at March 31, 2020 compared with the prior year, primarily due to additional borrowings during fiscal 2020. In response to the economic impacts of the COVID-19 pandemic, we executed amendments to our primary credit agreements in May 2020 to provide additional covenant flexibility. The amendments temporarily raise the leverage coverage ratio limit during the next two fiscal years.

Our credit agreements require us to maintain compliance with various covenants. As specified in the credit agreement, the term loans may require prepayments in the event of certain asset sales. In addition, at the time of each incremental borrowing under the revolving credit facility, we must represent to the lenders that there has been no material adverse effect, as defined in the credit agreement, on our business, property, or results of operations.

Under our primary credit agreements in the U.S., we are subject to a leverage ratio covenant, which requires us to limit our consolidated indebtedness, less a portion of our cash balance, both as defined by the credit agreements, in relation to our consolidated net earnings before interest, taxes, depreciation, amortization, and certain other adjustments ("Adjusted EBITDA"). The leverage ratio covenant limit was 3.25 to 1 through the fourth quarter of fiscal 2020. 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. As of March 31, 2020, we were in compliance with our debt covenants; our leverage ratio and interest coverage ratio were 2.4 and 8.1, respectively.

In May 2020, as noted above, we executed amendments to our primary credit agreements that provide additional financial covenant flexibility during the next two fiscal years in light of the risks and uncertainties associated with the COVID-19 pandemic. We believe this additional flexibility will enable us to be compliant with our debt covenants, even if the adverse effects of the COVID-19 pandemic on our business are more severe than we currently anticipate. However, failure to comply with the debt covenants could result in an event of default, which, if not cured or waived, could result in us being required to repay borrowings before their due date. Under the amended agreements, the leverage ratio covenant limit is temporarily raised. For fiscal 2021, the leverage ratio covenant limit is 4.00 to 1, 4.75 to 1, 5.25 to 1, and 5.75 to 1 for the first, second, third, and fourth quarters, respectively. In fiscal 2022, the leverage ratio covenant limit is 4.75 to 1, 3.75 to 1, and 3.50 to 1 for the first, second and third quarters, respectively, and subsequently returns to 3.25 to 1 for the fourth quarter of fiscal 2022. We expect to remain in compliance with our debt covenants during fiscal 2021 and beyond.

See Note 17 of the Notes to Consolidated Financial Statements for additional information regarding our credit agreements.

Off-Balance Sheet Arrangements

None.

Contractual Obligations

	March 31, 2020				
(in millions)	Total	Less than 1 year	1 - 3 years	4 - 5 years	More than 5 years
Long-term debt	$ 468.9	$ 15.2	$ 42.6	$ 294.4	$ 116.7
Interest associated with long-term debt	89.3	17.7	33.4	24.5	13.7
Operating lease obligations	71.8	12.8	20.7	12.1	26.2
Capital expenditure commitments	12.0	12.0	-	-	-
Other long-term obligations (a)	9.9	1.9	3.1	3.0	1.9
Total contractual obligations	$ 651.9	$ 59.6	$ 99.8	$ 334.0	$ 158.5

(a) Includes finance lease obligations and other long-term obligations.

Our liabilities for pensions, postretirement benefits, and uncertain tax positions totaled $145 million as of March 31, 2020. 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 $20 million to our U.S. pension plans during fiscal 2021.

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 either have or could significantly impact our financial statement are disclosed in Note 1 of the Notes to Consolidated Financial Statements.

Revenue Recognition

In fiscal 2019, we adopted new revenue recognition accounting guidance. In accordance with this new accounting guidance, we recognize revenue based upon consideration specified in a contract and as we satisfy performance obligations by transferring control over our products to our customers, which may be at a point in time or over time. The majority of our revenue is recognized at a point in time, based upon shipment terms. A limited number of our customer contracts provide an enforceable right to payment for performance completed to date. For these contracts, we recognize revenue over time based upon our estimated progress towards the satisfaction of the contract's performance obligations. We record an allowance for doubtful accounts for estimated uncollectible receivables and we accrue for estimated warranty costs at the time of sale. We base these estimates upon historical experience, current business trends, and current economic conditions.

Impairment of Long-Lived Assets

We perform impairment evaluations of long-lived assets, including property, plant and equipment and intangible assets, 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, 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 $448 million and $106 million, respectively, at March 31, 2020. 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 2020, we recorded asset impairment charges totaling $8 million, primarily related manufacturing facilities in Austria and Germany within the VTS segment. See Note 5 of the Notes to the 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. We test goodwill for impairment by comparing the fair value of each reporting unit with 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 a reporting unit exceeds the carrying value of the reporting unit's net assets, goodwill is not impaired. However, if the carrying value of the reporting unit's net assets exceeds its fair value, we would conclude goodwill is impaired and would record an impairment charge equal to the amount that the reporting unit's carrying value exceeds its fair value.

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, risk-adjusted discount rates, 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 rates used in determining discounted cash flows are rates corresponding to our cost of capital, adjusted for country-specific risks where appropriate. While we believe the assumptions used in our goodwill impairment tests are appropriate and result in a reasonable estimate of the fair value of each reporting unit, future events or circumstances could have a potential negative effect on the estimated fair value of our reporting units. These events or circumstances include lower than forecasted revenues, market trends that fall below our current expectations, actions of key customers, increases in discount rates, and the continued economic uncertainty and impacts associated with the COVID-19 pandemic. We cannot predict the occurrence of certain events or changes in circumstances that might adversely affect the carrying value of goodwill.

At March 31, 2020, our goodwill totaled $166 million related to our CIS and BHVAC segments. Each of these segments is comprised of two reporting units. We conducted annual goodwill impairment tests during the fourth quarter of fiscal 2020 by applying a fair value-based test and determined the fair value of each of our reporting units exceeded the respective book value.

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.

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 $8 million at March 31, 2020, 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, 2020, our pension liabilities totaled $134 million. The most significant assumptions include the discount rate, long-term expected return on plan assets, and mortality rates. 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 pension 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 both fiscal 2020 and 2019 was 7.5 percent. For fiscal 2021, we have also 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 2021 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 2020 and 2019, for purposes of determining pension expense, we used a discount rate of 4.0 percent. We determined these rates based upon a yield curve that was created following an analysis of the projected cash flows from our plans. See Note 18 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 2021 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.

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, which is made on a jurisdiction-by-jurisdiction basis, involves judgment and the use of significant estimates and assumptions, including expectations of future taxable income and tax planning strategies. We believe the assumptions that we used are appropriate and result in a reasonable determination regarding the future realizability of deferred tax assets. However, future events or circumstances, such as lower-than-expected taxable income or unfavorable changes in the financial outlook of our operations in certain jurisdictions, could cause us to record additional valuation allowances.

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 20 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:

- The impact of the COVID-19 pandemic on the national and global economy, our business, suppliers, customers, and employees;
- 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 (and any potential trade war resulting from tariffs or retaliatory actions); inflation; changes in interest rates; recession and recovery therefrom; restrictions and uncertainty associated with cross-border trade, public health crises, such as pandemics and epidemics, including the ongoing COVID-19 pandemic; and the general uncertainties about the impact of regulatory and/or policy changes, including those related to tax and trade, the COVID-19 pandemic and other matters, that have been or may be implemented in the United States or abroad, as well as continuing uncertainty regarding the short- and long-term implications of "Brexit";
- The impact of potential price increases associated with raw materials, including aluminum, copper, steel and stainless steel (nickel), and other purchased component inventory including, but not limited to, increases in the underlying material cost based upon the London Metal Exchange and related premiums or fabrication costs. These prices may be impacted by a variety of factors, including changes in trade laws and tariffs, the behavior of our suppliers and significant fluctuations in demand. This risk includes our ability to successfully manage our exposure and our ability to adjust product pricing in response to price increases, whether through our quotation process or through contract provisions for prospective price adjustments, as well as the inherent lag in timing of such contract provisions; 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:

- 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;

- Unanticipated problems with suppliers meeting our time, quantity, quality and price demands, and the overall health of our suppliers, including their ability and willingness to supply our volume demands if their production capacity becomes constrained;
- 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 operating inefficiencies, including unanticipated program launch and product transfer challenges and warranty claims and delays or inefficiencies resulting from restrictions imposed in response to the COVID-19 pandemic;
- Unanticipated delays or modifications initiated by major customers with respect to program launches, product applications or requirements;
- 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 reduce our cost structure in response to sales volume declines and to complete restructuring activities and realize the anticipated benefits of those activities;
- 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;
- Our ability to recruit and maintain talent, including personnel in managerial, leadership and administrative functions, in light of tight global labor markets;
- Our ability to protect our proprietary information and intellectual property from theft or attack by internal or external sources;
- The impact of any substantial disruption or material breach of our information technology systems, and any related delays, problems or costs;
- 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 exit the automotive business within our VTS segment in a manner that is in the best interest of our shareholders in order to optimize the segment's future financial performance;
- Our ability to successfully realize anticipated benefits from our increased "industrial" market presence, with our CIS and BHVAC businesses, while maintaining appropriate focus on the market opportunities presented by our VTS business;
- Our ability to identify and execute growth and diversification opportunities in order to position us for long-term success; and

- The potential impacts from unanticipated actions by activist shareholders, including disruption of our business and related costs.

Financial Risks:

- Our ability to fund our global liquidity requirements efficiently for Modine's current operations and meet our long-term commitments, particularly in light of the significant volatility and negative pressure in the financial markets as a result of the COVID-19 pandemic and in the event of 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 the Euro Interbank Offered Rate ("EURIBOR") in relation to our variable-rate debt obligations, and of the continued uncertainty around the utilization of LIBOR or alternative reference rates;

- Our ability to comply with the financial covenants as amended in our credit agreements, including our leverage ratio (net debt divided by Adjusted EBITDA, as defined in our credit agreements) and our interest coverage ratio (Adjusted EBITDA divided by interest expense, as defined in our credit agreements);

- The potential unfavorable impact of foreign currency exchange rate fluctuations on our financial results; and

- Our ability to effectively realize the benefits of deferred tax assets in various jurisdictions in which we operate.

Forward-looking statements are as of the date of this report; 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 other market changes.

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, and throughout Europe. We also have joint ventures in China 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 foreign currency derivative contracts to further manage our foreign currency risk. In fiscal 2020, we recorded a net gain of less than $1 million within our statement of operations related to foreign currency derivative contracts. 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 primarily 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 2020, 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 2020, changes in foreign currency exchange rates unfavorably impacted our sales by $46 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 2020, there would not have been a material impact on our fiscal 2020 earnings.

We maintain foreign currency-denominated debt obligations and 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 foreign currency derivative contracts to manage the currency 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 typically offset the foreign currency changes on the outstanding loans.

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 LIBOR or EURIBOR, plus 137.5 to 250 basis points, depending on our leverage ratio. For purposes of calculating the variable interest rate under our current credit agreement, LIBOR cannot be less than one percent. As a result, 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, 2020, our outstanding borrowings on variable-rate term loans and the revolving credit facility totaled $189 million and $127 million, respectively. Based upon our outstanding debt with variable interest rates at March 31, 2020, a 100-basis point increase in interest rates would increase our annual interest expense in fiscal 2021 by approximately $3 million.

Commodity and Supply Risks

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. Commodity price risk is most prevalent to our vehicular businesses, which provide customized production and service parts to customers under multi-year programs. In order to mitigate commodity price risk specific to these long-term sales programs, we maintain contract provisions with certain customers that allow us to prospectively adjust prices based upon raw material price fluctuations. These prospective price adjustments generally lag behind the actual raw material price fluctuations by three months or longer, and typically the contract provisions are limited to the underlying material cost based upon the London Metal Exchange and exclude additional cost elements, such as related premiums and fabrication. For our industrial businesses, we predominantly seek to mitigate commodity price risk by adjusting product pricing in response to any applicable price increases.

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 or willing 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.

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, 2020, 34 percent of our trade accounts receivable balance was concentrated with our top ten customers. These customers operate primarily in the automotive, commercial vehicle, off-highway, data center cooling and commercial air conditioning markets and are influenced by similar market and general economic factors. In the past, credit losses from our customers have not been significant, nor have we experienced a significant increase in credit losses in connection with the COVID-19 pandemic.

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, 2020;
- *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 maintain financial ratings that are acceptable to us. We have not identified any concerns in this regard based upon our reviews.

In addition, 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.

Economic and Market 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 in diverse markets, including the automotive, commercial vehicle, off-highway, and commercial, industrial, and building HVAC&R markets. The COVID-19 pandemic has negatively impacted these markets; the duration and severity of the impacts of COVID-19 on these markets are currently uncertain. We are monitoring economic conditions in the U.S. and abroad and the impacts associated with the COVID-19 pandemic.

Considering 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. 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.

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 2020 and 2019, 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 2020, 2019 and 2018, net gains and losses recognized in cost of sales 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 that the underlying transactions impact earnings. In fiscal 2020, 2019, and 2018, net gains and losses recognized in sales and cost of sales related to foreign currency forward contracts were less than $1 million in each year. 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 maintain credit ratings acceptable to us. At March 31, 2020, all counterparties had a sufficient long-term credit rating.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

MODINE MANUFACTURING COMPANY
CONSOLIDATED STATEMENTS OF OPERATIONS
For the years ended March 31, 2020, 2019 and 2018
(In millions, except per share amounts)

	2020	2019	2018
Net sales	$ 1,975.5	$ 2,212.7	$ 2,103.1
Cost of sales	1,668.0	1,847.2	1,746.6
Gross profit	307.5	365.5	356.5
Selling, general and administrative expenses	249.6	244.1	245.8
Restructuring expenses	12.2	9.6	16.0
Impairment charges	8.6	0.4	2.5
(Gain) loss on sale of assets	(0.8)	1.7	-
Operating income	37.9	109.7	92.2
Interest expense	(22.7)	(24.8)	(25.6)
Other expense - net	(4.8)	(4.1)	(3.3)
Earnings before income taxes	10.4	80.8	63.3
(Provision) benefit for income taxes	(12.4)	5.1	(39.5)
Net (loss) earnings	(2.0)	85.9	23.8
Net earnings attributable to noncontrolling interest	(0.2)	(1.1)	(1.6)
Net (loss) earnings attributable to Modine	$ (2.2)	$ 84.8	$ 22.2
Net (loss) earnings per share attributable to Modine shareholders:			
Basic	$ (0.04)	$ 1.67	$ 0.44
Diluted	$ (0.04)	$ 1.65	$ 0.43
Weighted-average shares outstanding:			
Basic	50.8	50.5	49.9
Diluted	50.8	51.3	50.9

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

MODINE MANUFACTURING COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
For the years ended March 31, 2020, 2019 and 2018
(In millions)

	2020	2019	2018
Net (loss) earnings	$ (2.0)	$ 85.9	$ 23.8
Other comprehensive income (loss):			
Foreign currency translation	(19.2)	(37.6)	41.8
Defined benefit plans, net of income taxes of ($ 8.3), ($0.3) and ($0.2) million	(24.6)	(1.4)	0.1
Cash flow hedges, net of income taxes of ($ 0.5), $0.1 and $0.1 million	(1.5)	0.4	0.1
Total other comprehensive income (loss)	(45.3)	(38.6)	42.0
Comprehensive income (loss)	(47.3)	47.3	65.8
Comprehensive (income) loss attributable to noncontrolling interest	0.2	(0.6)	(2.1)
Comprehensive income (loss) attributable to Modine	$ (47.1)	$ 46.7	$ 63.7

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

MODINE MANUFACTURING COMPANY
CONSOLIDATED BALANCE SHEETS
March 31, 2020 and 2019
(In millions, except per share amounts)

	2020	2019
ASSETS		
Cash and cash equivalents	$ 70.9	$ 41.7
Trade accounts receivable – net	292.5	338.6
Inventories	207.4	200.7
Other current assets	62.5	65.8
Total current assets	633.3	646.8
Property, plant and equipment – net	448.0	484.7
Intangible assets – net	106.3	116.2
Goodwill	166.1	168.5
Deferred income taxes	104.8	97.1
Other noncurrent assets	77.6	24.7
Total assets	$ 1,536.1	$ 1,538.0
LIABILITIES AND SHAREHOLDERS' EQUITY		
Short-term debt	$ 14.8	$ 18.9
Long-term debt – current portion	15.6	48.6
Accounts payable	227.4	280.9
Accrued compensation and employee benefits	65.0	81.7
Other current liabilities	49.2	39.9
Total current liabilities	372.0	470.0
Long-term debt	452.0	382.2
Deferred income taxes	8.1	8.2
Pensions	130.9	101.7
Other noncurrent liabilities	79.5	34.8
Total liabilities	1,042.5	996.9
Commitments and contingencies (see Note 20)		
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 53.4 million and 52.8 million shares	33.3	33.0
Additional paid-in capital	245.1	238.6
Retained earnings	469.9	472.1
Accumulated other comprehensive loss	(223.3)	(178.4)
Treasury stock, at cost, 2.5 million and 2.1 million shares	(37.1)	(31.4)
Total Modine shareholders' equity	487.9	533.9
Noncontrolling interest	5.7	7.2
Total equity	493.6	541.1
Total liabilities and equity	$ 1,536.1	$ 1,538.0

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

MODINE MANUFACTURING COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the years ended March 31, 2020, 2019 and 2018
(In millions)

	2020	2019	2018
Cash flows from operating activities:			
Net (loss) earnings	$ (2.0)	$ 85.9	$ 23.8
Adjustments to reconcile net (loss) earnings to net cash provided by operating activities:			
Depreciation and amortization	77.1	76.9	76.7
Impairment charges	8.6	0.4	2.5
(Gain) loss on sale of assets	(0.8)	1.7	-
Stock-based compensation expense	6.6	7.9	9.5
Deferred income taxes	1.0	(4.4)	12.1
Other – net	5.6	5.3	9.0
Changes in operating assets and liabilities:			
Trade accounts receivable	36.6	(15.3)	(26.1)
Inventories	(12.0)	(22.0)	(12.5)
Accounts payable	(37.7)	16.6	25.2
Accrued compensation and employee benefits	(15.2)	(10.1)	16.4
Other assets	14.7	(11.8)	(5.0)
Other liabilities	(24.6)	(27.8)	(7.4)
Net cash provided by operating activities	57.9	103.3	124.2
Cash flows from investing activities:			
Expenditures for property, plant and equipment	(71.3)	(73.9)	(71.0)
Proceeds from dispositions of assets	6.2	0.3	0.3
Proceeds from sale of investment in affiliate	3.8	-	-
Proceeds from maturities of short-term investments	4.1	4.9	4.8
Purchases of short-term investments	(3.3)	(3.8)	(5.5)
Other – net	-	(0.3)	(0.2)
Net cash used for investing activities	(60.5)	(72.8)	(71.6)
Cash flows from financing activities:			
Borrowings of debt	692.4	231.2	171.0
Repayments of debt	(649.5)	(251.9)	(222.9)
Dividend paid to noncontrolling interest	(1.3)	(1.8)	(0.9)
Purchase of treasury stock under share repurchase program	(2.4)	(0.6)	-
Financing fees paid	(2.8)	-	-
Other – net	(3.1)	(2.8)	2.7
Net cash provided by (used for) financing activities	33.3	(25.9)	(50.1)
Effect of exchange rate changes on cash	(1.6)	(2.7)	3.0
Net increase in cash, cash equivalents and restricted cash	29.1	1.9	5.5
Cash, cash equivalents and restricted cash - beginning of year	42.2	40.3	34.8
Cash, cash equivalents and restricted cash - end of year	$ 71.3	$ 42.2	$ 40.3

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

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MODINE MANUFACTURING COMPANY
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
For the years ended March 31, 2020, 2019 and 2018
(In millions)

	Common stock		Additional paid-in capital	Retained earnings	Accumulated other comprehensive loss	Treasury stock, at cost	Non-controlling interest	Total
	Shares	Amount						
Balance, March 31, 2017	51.8	$ 32.4	$ 216.4	$ 372.4	$ (181.8)	$ (25.4)	$ 7.2	$ 421.2
Net earnings attributable to Modine	-	-	-	22.2	-	-	-	22.2
Other comprehensive income	-	-	-	-	41.5	-	0.5	42.0
Stock options and awards	0.5	0.3	3.9	-	-	-	-	4.2
Purchase of treasury stock	-	-	-	-	-	(1.7)	-	(1.7)
Adoption of new accounting guidance (Note 1)	-	-	0.1	0.3	-	-	-	0.4
Stock-based compensation expense	-	-	9.5	-	-	-	-	9.5
Dividend paid to noncontrolling interest	-	-	-	-	-	-	(0.9)	(0.9)
Net earnings attributable to noncontrolling interest	-	-	-	-	-	-	1.6	1.6
Balance, March 31, 2018	52.3	32.7	229.9	394.9	(140.3)	(27.1)	8.4	498.5
Adoption of new accounting guidance (Note 1)	-	-	-	(7.6)	-	-	-	(7.6)
Net earnings attributable to Modine	-	-	-	84.8	-	-	-	84.8
Other comprehensive loss	-	-	-	-	(38.1)	-	(0.5)	(38.6)
Stock options and awards	0.5	0.3	0.8	-	-	-	-	1.1
Purchase of treasury stock	-	-	-	-	-	(4.3)	-	(4.3)
Stock-based compensation expense	-	-	7.9	-	-	-	-	7.9
Dividend paid to noncontrolling interest	-	-	-	-	-	-	(1.8)	(1.8)
Net earnings attributable to noncontrolling interest	-	-	-	-	-	-	1.1	1.1
Balance, March 31, 2019	52.8	33.0	238.6	472.1	(178.4)	(31.4)	7.2	541.1
Net loss attributable to Modine	-	-	-	(2.2)	-	-	-	(2.2)
Other comprehensive loss	-	-	-	-	(44.9)	-	(0.4)	(45.3)
Stock options and awards	0.6	0.3	(0.1)	-	-	-	-	0.2
Purchase of treasury stock	-	-	-	-	-	(5.7)	-	(5.7)
Stock-based compensation expense	-	-	6.6	-	-	-	-	6.6
Dividend paid to noncontrolling interest	-	-	-	-	-	-	(1.3)	(1.3)
Net earnings attributable to noncontrolling interest	-	-	-	-	-	-	0.2	0.2

Balance, March 31, 2020	53.4	$	33.3	$	245.1	$	469.9	$	(223.3)	$	(37.1)	$	5.7	$	493.6

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

Note 1: Significant Accounting Policies

Nature of operations: Modine Manufacturing Company ("Modine" or the "Company") specializes in providing innovative thermal management solutions to diversified global markets and customers. The Company is 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, the Company is 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. The Company's primary product groups include i) powertrain cooling and engine cooling; ii) coils, coolers, and coatings; and iii) heating, ventilation and air conditioning.

COVID-19: In March 2020, the World Health Organization declared the outbreak of the novel coronavirus, COVID-19, a pandemic. See Note 20 for additional information regarding the risks and uncertainties to our business resulting from this global pandemic .

Sale of facility in Germany: During fiscal 2020, the Company completed the sale of a previously-closed manufacturing facility in Germany for a selling price of $6.0 million. As a result of this transaction, the Company recorded a gain of $ 0.8 million within the Vehicular Thermal Solutions segment. The Company reported this gain within the gain on sale of assets line on the consolidated statements of operations.

Sale of Nikkei Heat Exchanger Company, Ltd. ("NEX") : During fiscal 2020, the Company completed the sale of its 50 percent ownership interest in NEX for a selling price of $3.8 million. As a result of this sale, the Company recorded a gain of $ 0.1 million, which included the write-off of accumulated foreign currency translation gains of $0.6 million, within other income and expense on the consolidated statements of operations. Prior to its sale, the Company accounted for its investment in NEX using the equity method. Utilizing the equity method, the Company reported its investment at cost, plus or minus a proportionate share of undistributed net earnings, and included Modine's share of the affiliate's net earnings in other income and expense. See Note 12 for additional information.

Sale of AIAC Air Conditioning South Africa (Pty) Ltd. : During fiscal 2019, the Company completed the sale of its AIAC Air Conditioning South Africa (Pty) Ltd. business, which was reported within the Building HVAC Systems segment, for a selling price of $0.5 million. As a result of this transaction, the Company recorded a loss of $1.7 million, which included the write-off of accumulated foreign currency translation losses of $0.8 million. The Company reported this loss within the loss on sale of assets line on the consolidated statements of operations. Annual net sales attributable to this disposed business were less than $2.0 million.

Basis of presentation: The Company prepares its consolidated financial statements in conformity with generally accepted accounting principles ("GAAP") in the United States. These principles require management to make certain estimates and assumptions in determining assets, liabilities, revenue, expenses and related disclosures. Actual amounts could differ materially from those estimates.

Consolidation principles: The consolidated financial statements include the accounts of Modine Manufacturing Company and its majority-owned or Modine-controlled subsidiaries. The Company eliminates intercompany transactions and balances in consolidation.

Revenue recognition: The Company recognizes revenue based upon consideration specified in a contract and as it satisfies performance obligations by transferring control over its products to its customers, which may be at a point in time or over time. The majority of the Company's revenue is recognized at a point in time, based upon shipment terms. A portion of the Company's revenue is recognized over time, based upon estimated progress towards satisfaction of the contractual performance obligations. See Note 2 for additional information.

Shipping and handling costs: The Company records shipping and handling costs incurred upon the shipment of products to its customers in cost of sales, and related amounts billed to these customers in net sales.

Trade accounts receivable: The Company records trade receivables at the invoiced amount. Trade receivables do not bear interest if paid according to the original terms. The Company records an allowance for doubtful accounts for estimated uncollectible receivables based upon historical experience or specific customer economic data. The Company recorded an allowance for doubtful accounts of $1.9 million and $1.6 million at March 31, 2020 and 2019, respectively, representing its estimated uncollectible receivables. The Company enters into supply chain financing programs from time to time to sell accounts receivable, without recourse, to third-party financial institutions. Sales of accounts receivable are reflected as a reduction of accounts receivable on the consolidated balance sheets and the proceeds are included in cash flows from operating activities in the consolidated statements of cash flows. During fiscal 2020, 2019, and 2018, the Company sold $75.4 million, $85.1 million, and $65.8 million, respectively, of accounts receivable to accelerate cash receipts. During fiscal 2020, 2019, and 2018, the Company recorded a loss on the sale of accounts receivable of $0.5 million, $0.6 million, and $0.4 million, respectively, in the consolidated statements of operations.

Warranty: The Company provides product warranties for specific product lines and accrues for estimated future warranty costs in the period in which the sale is recorded. The Company records warranty expense, within cost of sales, based upon historical and current claims data or based upon estimated future claims. Accrual balances, which are recorded within other current liabilities, are monitored and adjusted if it is probable that expected claims will differ from previous estimates. See Note 15 for additional information.

Tooling costs: The Company accounts for production tooling costs as a component of property, plant and equipment when it owns title to the tooling and amortizes the capitalized cost to cost of sales over the estimated life of the asset, which is generally three years. At March 31, 2020 and 2019, Company-owned tooling totaled $23.3 million and $24.2 million, respectively. In certain instances, tooling is customer-owned. At the time customer-owned tooling is completed and customer acceptance is obtained, the Company records tooling revenue and related production costs within net sales and cost of sales, respectively, in the consolidated statements of operations. The Company accounts for unbilled customer-owned tooling costs as a receivable within other current assets when the customer has guaranteed reimbursement to the Company. No significant arrangements exist where customer-owned tooling costs were not accompanied by guaranteed reimbursement. At March 31, 2020 and 2019, cost reimbursement receivables related to customer-owned tooling totaled $7.8 million and $11.6 million, respectively.

Stock-based compensation: The Company recognizes stock-based compensation using the fair value method. Accordingly, compensation expense for stock options, restricted stock and performance-based stock awards is calculated based upon the fair value of the instruments at the time of grant, and is recognized as expense over the respective vesting periods. See Note 4 for additional information.

Research and development: The Company expenses research and development costs as incurred within SG&A expenses. During fiscal 2020, 2019, and 2018, research and development costs charged to operations totaled $59.5 million, $69.8 million, and $65.8 million, respectively.

Translation of foreign currencies: The Company translates assets and liabilities of foreign subsidiaries and equity investments into U.S. dollars at the period-end exchange rates, and translates income and expense items at the monthly average exchange rate for the period in which the transactions occur. The Company reports resulting translation adjustments within accumulated other comprehensive income (loss) within shareholders' equity. The Company includes foreign currency transaction gains or losses in the statement of operations within other income and expense.

Derivative instruments: The Company enters into derivative financial instruments from time to time to manage certain financial risks. The Company enters into forward contracts to reduce exposure to changing future purchase prices for aluminum and copper and into foreign currency exchange contracts to hedge specific foreign currency-denominated assets and liabilities as well as forecasted transactions. The Company designates certain derivative financial instruments as cash flow hedges for accounting purposes. These instruments are used to manage financial risks and are not speculative. See Note 19 for additional information.

Income taxes: The Company determines deferred tax assets and liabilities based upon the difference between the amounts reported in the financial statements and the tax basis of assets and liabilities, using enacted tax rates in effect in the years in which the differences are expected to reverse. The Company establishes a valuation allowance if it is more likely than not that a deferred tax asset, or portion thereof, will not be realized. See Note 7 for additional information.

Earnings per share: The Company calculates basic earnings per share based upon the weighted-average number of common shares outstanding during the period, while the calculation of diluted earnings per share includes the dilutive effect of potential common shares outstanding during the period. The calculation of diluted earnings per share excludes potential common shares if their inclusion would have an anti-dilutive effect. Certain outstanding restricted stock awards provide recipients with a non-forfeitable right to receive dividends declared by the Company. Therefore, these restricted stock awards are included in computing earnings per share pursuant to the two-class method. See Note 8 for additional information.

Cash and cash equivalents: The Company considers all highly-liquid investments with original maturities of three months or less to be cash equivalents. Under the Company's cash management system, cash balances at certain banks are funded when checks are presented for payment. To the extent checks issued, but not yet presented for payment, exceed the balance on hand at the specific bank against which they were written, the Company reports the amount of those checks within accounts payable in the consolidated balance sheets.

Short-term investments: The Company invests in time deposits with original maturities of more than three months but not more than one year. The Company records these short-term investments at cost, which approximates fair value, within other current assets in the consolidated balance sheets. As of March 31, 2020 and 2019, the Company's short-term investments totaled $3.2 million and $4.3 million, respectively.

Inventories: The Company values inventories using a first-in, first-out or weighted-average basis, at the lower of cost and net realizable value.

Property, plant and equipment: The Company records property, plant and equipment at cost. For financial reporting purposes, the Company computes depreciation using the straight-line method over the expected useful lives of the assets. The Company charges maintenance and repair costs to operations as incurred. The Company capitalizes costs of improvements. Upon the sale or other disposition of an asset, the Company removes the cost and related accumulated depreciation from the accounts and includes the gain or loss in the consolidated statements of operations. Capital expenditures of $8.7 million, $17.9 million, and $15.8 million were accrued within accounts payable at March 31, 2020, 2019, and 2018, respectively.

Goodwill: The Company does not amortize goodwill; rather, it tests for impairment annually unless conditions exist that would require a more frequent evaluation. The Company performs an assessment of the fair value of its reporting units for goodwill impairment testing based upon, among other things, the present value of expected future cash flows. The Company performed its goodwill impairment test as of March 31, 2020 and, as a result, recorded a $0.5 million impairment charge within the VTS segment. See Note 14 for additional information.

Impairment of long-lived assets: The Company reviews long-lived assets, including property, plant and equipment and intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be fully recoverable. In these instances, the Company compares the undiscounted future cash flows expected to be generated from the asset with its carrying value. If the asset's carrying value exceeds expected future cash flows, the Company measures and records an impairment loss, if any, as the amount by which the carrying value of the asset exceeds its fair value. The Company estimates fair value using a variety of valuation techniques, including discounted cash flows, market values and comparison values for similar assets. During fiscal 2020, the Company recorded impairment charges totaling $8.1 million related to long-lived assets. See Note 5 for additional information.

Assets held for sale: The Company considers assets to be held for sale when management approves and commits to a formal plan to actively market the asset for sale at a reasonable price in relation to its fair value, the asset is available for immediate sale in its present condition, an active program to locate a buyer and other actions required to complete the sale have been initiated, the sale of the asset is expected to be completed within one year and it is unlikely that significant changes will be made to the plan. Upon designation as held for sale, the Company records the carrying value of the assets at the lower of its carrying value or its estimated fair value, less costs to sell, within other noncurrent assets. The Company ceases to record depreciation expense at the time of designation as held for sale. The carrying value of assets held for sale totaled $0.6 million and $1.1 million at March 31, 2020 and 2019, respectively.

Deferred compensation trusts: The Company maintains deferred compensation trusts to fund future obligations under its non-qualified deferred compensation plans. The trusts' investments in third-party debt and equity securities are presented within other noncurrent assets in the consolidated balance sheets.

Self-insurance reserves: The Company retains a portion of the financial risk for certain insurance coverage, including property, general liability, workers compensation, and employee healthcare, and therefore maintains reserves that estimate the impact of unreported and under-reported claims that fall below various stop-loss limits and deductibles under its insurance policies. The Company maintains reserves for the estimated settlement cost of known claims, as well as estimates of incurred but not reported claims. The Company charges costs of claims, including the impact of changes in reserves due to claim experience and severity, to operations. The Company reviews and updates the amount of its insurance-related reserves on a quarterly basis.

Environmental liabilities: The Company records liabilities for environmental assessments and remediation activities in the period in which its responsibility is probable and the costs can be reasonably estimated. The Company records environmental indemnification assets from third parties, including prior owners, when recovery is probable. To the extent that the required remediation procedures change, or additional contamination is identified, the Company's estimated environmental liabilities may also change. See Note 20 for additional information.

Supplemental cash flow information:

	Years ended March 31,		
	2020	**2019**	**2018**
Interest paid	$ 21.4	$ 22.3	$ 23.4
Income taxes paid	18.8	22.2	20.1

New Accounting Guidance Adopted in Fiscal 2020:

Leases
In February 2016, the Financial Accounting Standards Board ("FASB") issued new comprehensive lease accounting guidance that supersedes existing lease accounting guidance and requires balance sheet recognition for most leases. The Company adopted this guidance effective April 1, 2019 using a modified-retrospective transition method, under which it elected not to adjust comparative periods. The Company elected the package of practical expedients permitted under the new guidance, and, as a result, the Company did not reassess the classification of existing leases or initial direct costs thereof, or whether existing contracts contain leases. In addition, the Company elected accounting policies to not record short-term leases on the balance sheet and to not separate lease and non-lease components. The Company did not elect the hindsight practical expedient.

The Company assessed its global lease portfolio and implemented a new lease accounting software solution and new processes and controls to account for leases in accordance with the new guidance. The Company's most significant leases represent leases of real estate, such as manufacturing facilities, warehouses, and office buildings. The Company also leases certain manufacturing and IT equipment and vehicles. Upon adoption of this new guidance on April 1, 2019, the Company recognized right-of-use assets for operating leases totaling $61.3 million and corresponding current and noncurrent operating lease liabilities of $ 12.4 million and $48.9 million, respectively. In addition, the Company assessed two existing build-to-suit arrangements, for which it had recorded property, plant and equipment and long-term debt on its consolidated balance sheet as of March 31, 2019. The Company determined these arrangements represent operating leases under the new accounting guidance. As a result, the Company derecognized the previously-recorded balances and recorded $5.2 million of operating lease right-of-use assets and corresponding lease liabilities. As a result of adopting the new guidance, there was not a significant impact on the Company's accounting for its previously-recorded capital leases, which are now classified as finance leases under the new guidance. In addition, there was no impact to retained earnings. Also, the adoption did not have a material impact on the Company's consolidated statement of operations or consolidated statement of cash flows. See Note 16 for additional information regarding the Company's leases.

Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income
In February 2018, the FASB issued new guidance related to the accounting for certain stranded income tax effects in accumulated other comprehensive income (loss) resulting from tax reform legislation that was enacted in the U.S. in December 2017. This guidance provided companies the option to reclassify stranded income tax effects to retained earnings. The Company adopted this guidance as of April 1, 2019 and chose not to reclassify stranded income tax effects; therefore, the adoption of this guidance did not impact the Company's consolidated financial statements.

New Accounting Guidance Adopted in Fiscal 2019:

Revenue Recognition
In May 2014, the FASB issued new guidance that outlines a comprehensive model for entities to use in accounting for revenue arising from contracts with customers. The core principle of the new guidance is that companies are to recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Company adopted this new guidance for fiscal 2019 using the modified-retrospective transition method.

The Company assessed customer contracts and evaluated contractual provisions in light of the new guidance. Through its evaluation process, the Company identified a limited number of customer contracts that provide an enforceable right to payment for customized products, which require revenue recognition prior to the product being shipped to the customer. As a result of its adoption of the new guidance, the Company recorded an increase of $0.7 million to retained earnings as of April 1, 2018, along with related balance sheet reclassifications. The increase to retained earnings represented $3.0 million of net sales that, had the new guidance been in effect, the Company would have recognized as of March 31, 2018. See Note 2 for additional information regarding revenue recognition.

Income Taxes: Intra-Entity Transfers of Assets Other than Inventory
In October 2016, the FASB issued new guidance related to income tax accounting for intercompany asset transfers. This new guidance requires companies to recognize the income tax effects of intercompany asset transfers other than inventory at the transaction date. The income tax effects of these transfers were previously deferred. The Company adopted this new guidance for fiscal 2019 using the modified-retrospective transition method. Upon adoption, the Company recorded a decrease to retained earnings of $8.3 million as of April 1, 2018.

New Accounting Guidance Adopted in Fiscal 2018:

Stock-based Compensation
In March 2016, the FASB issued new guidance to simplify several aspects of accounting for stock-based payment transactions. The Company adopted this guidance beginning in its first quarter of fiscal 2018. The Company elected to account for forfeitures in the period in which they occur and recorded a cumulative-effect adjustment to equity. In addition, the Company prospectively adopted the guidance requiring all excess tax benefits or deficiencies to be recognized as income tax expense or benefit when share-based awards are settled. The provisions of this guidance did not have a material impact on the Company's consolidated financial statements. As a result of adopting this new guidance, the Company recorded a $0.4 million increase to both deferred tax assets and equity as of April 1, 2017.

Note 2: Revenue Recognition

Effective April 1, 2018, the Company adopted new revenue recognition accounting guidance ; see Note 1 for additional information .

The Company generates revenue from selling innovative thermal management products and solutions to diversified global markets and customers. The Company recognizes revenue based upon consideration specified in a contract and as it satisfies performance obligations by transferring control over its products to its customers, which may be at a point in time or over time. The majority of the Company's revenue is recognized at a point in time, based upon shipment terms. The Company records an allowance for doubtful accounts for estimated uncollectible receivables and accrues for estimated warranty costs at the time of sale. These estimates are based upon historical experience, current business trends, and current economic conditions. The Company accounts for shipping and handling activities as fulfilment costs rather than separate performance obligations, and records shipping and handling costs in cost of sales and related amounts billed to customers in net sales. The Company establishes payment terms with its customers based upon industry and regional practices, which typically do not exceed 90 days. As the Company expects to receive payment from its customers within one year from the time of sale, it disregards the effects of the time value of money in its determination of the transaction price. The Company has not disclosed the value of unsatisfied performance obligations because the revenue associated with customer contracts for which the original expected performance period is greater than one year is immaterial.

The following is a description of the Company's principal revenue-generating activities:

Vehicular Thermal Solutions ("VTS")
The VTS segment principally generates revenue from providing engineered heat transfer systems and components for use in on- and off-highway original equipment. This segment provides powertrain and engine cooling products, including, but not limited to, radiators, charge air coolers, condensers, oil coolers, EGR coolers, and fuel coolers, to original equipment manufacturers ("OEMs") in the automotive, commercial vehicle, and off-highway markets in the Americas, Europe, and Asia regions. In addition, the VTS segment designs customer-owned tooling for OEMs and also serves Brazil's automotive and commercial vehicle aftermarkets.

While the VTS segment provides customized production and service parts to customers under multi-year programs, these programs typically do not contain contractually-guaranteed volumes to be purchased by the customer. As a result, individual purchase orders typically represent the quantities ordered by the customer. With the exception of a small number of VTS customers, the terms within the customer agreement, purchase order, or customer-owned tooling contract do not provide the Company with an enforceable right to payment for performance completed to date. As a result, the VTS segment recognizes revenue primarily at the time control is transferred to the customer based upon shipping terms, which is generally upon shipment.

In regard to VTS customers with contractual cancellation terms that provide an enforceable right to payment for performance completed to date, the Company recognizes revenue over time based upon its estimated progress towards satisfaction of the performance obligations. The VTS segment measures progress by evaluating the production status of ordered products not yet shipped to the customer.

For certain customer programs, the Company agrees to provide annual price reductions based upon contract terms. For these scheduled price reductions, the Company evaluates whether the provisions represent a material right to the customer, and if so, defers associated revenue as a result.

At times, the Company makes up-front incentive payments to certain customers related to future sales under multi-year programs. The Company capitalizes these incentive payments, which it expects to recover through future sales, and amortizes the assets as a reduction to revenue when the related products are sold to customers.

Commercial and Industrial Solutions ("CIS")
The CIS segment principally generates revenue from providing thermal management products, including customized coils and coolers, to the heating, ventilating, air conditioning, and refrigeration ("HVAC&R") markets in North America, Europe, and Asia. In addition, the segment applies corrosion protection solutions, which are referred to as coatings, to heat-transfer equipment.

For the sale of coils and coolers, individual customer purchase orders generally represent the Company's contract with its customers. With the exception of a small number of customers, the applicable customer contracts do not provide the Company with an enforceable right to payment for performance completed to date. As a result, the CIS segment recognizes revenue for its sale of coils and coolers primarily at the time control is transferred to the customer based upon shipping terms, which is generally upon shipment.

For both sales to customers whose contract cancellation terms provide an enforceable right to payment and sales from the coatings businesses, in which the customers control the heat-transfer equipment being enhanced by the coating application, the CIS segment recognizes revenue over time based upon its estimated progress towards satisfaction of the performance obligations. The segment measures progress by evaluating the production status towards completion of ordered products or services not yet shipped to its customers.

Building HVAC Systems ("BHVAC")

The BHVAC segment principally generates revenue from providing a variety of heating, ventilating, and air conditioning products, primarily for commercial buildings and related applications in North America and the U.K., as well as mainland Europe and the Middle East.

Heating products are manufactured in the U.S. and are generally sold to independent distributors, who in turn market the heating products to end customers. Because these products are sold to many different customers without contractual or practical limitations, the BHVAC segment recognizes revenue at the time control is transferred to the customer, generally the independent distributor, based upon shipping terms, which is generally upon shipment.

Ventilation and air conditioning products are highly-specified to a customer's needs; however, the underlying sales contracts do not provide the Company with an enforceable right to payment for performance completed to date. As a result, the BHVAC segment recognizes revenue for these products at the time control is transferred to the customer based upon shipping terms, which is generally upon shipment.

Disaggregation of Revenue

The table below presents revenue to external customers for each of the Company's business segments by primary end market, by geographic location and based upon the timing of revenue recognition:

	Year ended March 31, 2020				Year ended March 31, 2019			
	VTS	CIS	BHVAC	Segment Total	VTS	CIS	BHVAC	Segment Total
Primary end market:								
Automotive	$ 508.8	$ -	$ -	$ 508.8	$ 542.8	$ -	$ -	$ 542.8
Commercial vehicle	323.7	-	-	323.7	387.6	-	-	387.6
Off-highway	253.9	-	-	253.9	314.1	-	-	314.1
Commercial HVAC&R	-	463.1	176.6	639.7	-	506.3	167.7	674.0
Data center cooling	-	107.5	42.7	150.2	-	145.7	41.3	187.0
Industrial cooling	-	43.5	-	43.5	-	47.8	-	47.8
Other	90.8	9.8	1.8	102.4	107.2	7.8	3.4	118.4
Net sales	$ 1,177.2	$ 623.9	$ 221.1	$ 2,022.2	$ 1,351.7	$ 707.6	$ 212.4	$ 2,271.7
Geographic location:								
Americas	$ 554.4	$ 345.9	$ 139.1	$ 1,039.4	$ 613.7	$ 413.6	$ 124.9	$ 1,152.2
Europe	449.3	232.6	82.0	763.9	538.2	244.8	87.5	870.5
Asia	173.5	45.4	-	218.9	199.8	49.2	-	249.0
Net sales	$ 1,177.2	$ 623.9	$ 221.1	$ 2,022.2	$ 1,351.7	$ 707.6	$ 212.4	$ 2,271.7
Timing of revenue recognition:								
Products transferred at a point in time	$ 1,146.4	$ 518.2	$ 221.1	$ 1,885.7	$ 1,308.5	$ 571.1	$ 212.4	$ 2,092.0
Products transferred over time	30.8	105.7	-	136.5	43.2	136.5	-	179.7
Net sales	$ 1,177.2	$ 623.9	$ 221.1	$ 2,022.2	$ 1,351.7	$ 707.6	$ 212.4	$ 2,271.7

Contract Balances

Contract assets and contract liabilities from contracts with customers were as follows:

	March 31, 2020	March 31, 2019
Contract assets	$ 21.7	$ 22.6
Contract liabilities	5.6	4.0

Contract assets, included within other current assets in the consolidated balance sheets, primarily consist of capitalized costs related to customer-owned tooling contracts, wherein the customer has guaranteed reimbursement, and assets recorded for revenue recognized over time, which represent the Company's rights to consideration for work completed but not yet billed. The $0.9 million decrease in contract assets during fiscal 2020 primarily resulted from a decrease in capitalized costs related to customer-owned tooling contracts, partially offset by an increase in contract assets for revenue recognized over time.

Contract liabilities, included within other current liabilities in the consolidated balance sheets, consist of payments received in advance of satisfying performance obligations under customer contracts, including contracts for customer-owned tooling. The $1.6 million increase in contract liabilities during fiscal 2020 was primarily related to customer contracts for which payment had been received in advance of the Company's satisfaction of performance obligations.

Note 3: Fair Value Measurements

Fair value is defined as the price that would be received for an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. Fair value measurements are classified under the following hierarchy:

- Level 1 – Quoted prices for identical instruments in active markets.
- Level 2 – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable in active markets.
- Level 3 – Model-derived valuations in which one or more significant inputs are not observable.

When available, the Company uses quoted market prices to determine fair value and classifies such measurements as Level 1. In some cases, where market prices are not available, the Company uses observable market-based inputs to calculate fair value, in which case the measurements are classified as Level 2. If quoted or observable market prices are not available, the Company determines fair value based upon valuation models that use, where possible, market-based data such as interest rates, yield curves or currency rates. These measurements are classified as Level 3.

The carrying values of cash, cash equivalents, restricted cash, short-term investments, trade accounts receivable, accounts payable, and short-term debt approximate fair value due to the short-term nature of these instruments. The Company holds investments in deferred compensation trusts to fund obligations under certain non-qualified deferred compensation plans. The Company records the fair value of these investments within other noncurrent assets on its consolidated balance sheets. The Company classifies money market investments held by the trusts within Level 2 of the valuation hierarchy. The Company classifies all other investments held by the trusts within Level 1 of the valuation hierarchy, as it uses quoted market prices to determine the investments' fair value. The Company's deferred compensation obligations, which are recorded as other noncurrent liabilities, are recorded at the fair values of the investments held by the trust. The fair values of the investments and obligations for the Company's deferred compensation plans each totaled $3.8 million and $6.0 million as of March 31, 2020 and 2019, respectively. The $2.2 million decrease in the fair value of the investments and deferred compensation obligations from March 31, 2019 was primarily due to participant withdrawals during fiscal 2020. The fair value of the Company's long-term debt is disclosed in Note 17.

Plan assets related to the Company's pension plans were classified as follows:

	March 31, 2020		
	Level 1	Level 2	Total
Money market investments	$ -	$ 2.4	$ 2.4
Fixed income securities	-	8.7	8.7
Pooled equity funds	17.9	-	17.9
U.S. government and agency securities	-	13.1	13.1
Other	0.1	0.7	0.8
Fair value excluding investments measured at net asset value	18.0	24.9	42.9
Investments measured at net asset value			88.2
Total fair value			$ 131.1

	March 31, 2019		
	Level 1	Level 2	Total
Money market investments	$ -	$ 3.9	$ 3.9
Fixed income securities	-	9.4	9.4
Pooled equity funds	27.7	-	27.7
U.S. government and agency securities	-	12.3	12.3
Other	0.1	0.9	1.0
Fair value excluding investment measured at net asset value	27.8	26.5	54.3
Investment measured at net asset value			100.8
Total fair value			$ 155.1

The Company determined the fair value of money market investments to approximate their net asset values, without discounts for credit quality or liquidity restrictions, and classified them within Level 2 of the valuation hierarchy. The Company determined the fair value of pooled equity funds based upon quoted prices from active markets and classified them within Level 1 of the valuation hierarchy. The Company determined the fair value of certain fixed income securities and U.S. government and agency securities based upon recent bid prices or the average of recent bid and asking prices when available and, if not available, the Company valued them through matrix pricing models developed by sources considered by management to be reliable. The Company classified these assets within Level 2 of the valuation hierarchy. As of March 31, 2020 and 2019, the Company held no Level 3 assets within its pension plans.

As a practical expedient, the Company valued certain investments, including pooled equity, fixed income and a real estate fund, using their net asset value (NAV) per unit, and therefore, has not classified these investments within the fair value hierarchy. The terms and conditions for redemptions vary for the investments valued at NAV. The real estate and fixed income investment funds may be redeemed quarterly and monthly, respectively, with a 90-day and 60-day notice period, respectively. Other investments valued at NAV do not have significantly-restrictive redemption frequency or notice period requirements. The Company does not intend to sell or otherwise dispose of these investments at prices different than the NAV per unit.

Note 4: Stock-Based Compensation

The Company's stock-based incentive programs consist of the following: (1) a long-term incentive compensation program for officers and other executives that consists of stock awards, stock options, and performance-based stock awards granted for retention and performance, (2) a discretionary equity program for other management and key employees, and (3) stock awards for non-employee directors. The Company's Board of Directors and the Officer Nomination and Compensation Committee, as applicable, have discretionary authority to set the terms of the stock-based awards. Grants to employees during fiscal 2020 were issued under the Company's 2017 Incentive Compensation Plan. At present, the Company accomplishes the fulfillment of equity-based grants through the issuance of new common shares. As of March 31, 2020, approximately 1.8 million shares authorized under the 2017 Incentive Compensation Plan remain available for future grants. Employee participants have the opportunity to deliver back to the Company the number of shares from the vesting of stock awards sufficient to satisfy the individual's minimum tax withholding obligations. These shares are held as treasury shares. The Company recorded stock-based compensation expense of $6.6 million, $7.9 million, and $9.5 million in fiscal 2020, 2019, and 2018, respectively.

Stock Options: The Company recorded $1.3 million, $1.2 million, and $1.2 million of compensation expense related to stock options in fiscal 2020, 2019, and 2018, respectively. During fiscal 2020, 2019, and 2018, the fair value of stock options that vested was $1.2 million. As of March 31, 2020, the total compensation expense not yet recognized related to non-vested stock options was $2.4 million and the weighted-average period in which the remaining expense is expected to be recognized was 2.5 years.

The Company estimated the fair value of option awards on the date of grant using the Black-Scholes option valuation model and the following assumptions:

	Years ended March 31,		
	2020	2019	2018
Fair value of options	$ 5.56	$ 7.81	$ 7.30
Expected life of awards in years	6.3	6.3	6.4
Risk-free interest rate	2.2%	2.8%	1.9%
Expected volatility of the Company's stock	39.2%	39.7%	44.3%
Expected dividend yield on the Company's stock	0.0%	0.0%	0.0%

Stock options expire no later than 10 years after the grant date and have an exercise price equal to the fair market value of Modine's common stock on the date of grant. The risk-free interest rate was based upon yields of U.S. Treasury zero-coupon issues with a term corresponding to the expected life of the options. The expected volatility assumption was based upon changes in the Company's historical common stock prices over the same time frame as the expected life of the awards. The expected dividend yield is zero, as the Company currently does not anticipate paying dividends over the expected life of the options. The expected lives of the awards are based upon historical patterns and the terms of the options. Outstanding options granted vest 25 percent annually for four years.

A summary of stock option activity for fiscal 2020 was as follows:

	Shares	Weighted-average exercise price	Weighted-average remaining contractual term (years)	Aggregate intrinsic value
Outstanding, beginning	1.2	$ 12.24		
Granted	0.3	13.26		
Exercised	-	7.13		
Forfeited or expired	(0.1)	12.68		
Outstanding, ending	1.4	$ 12.49	5.6	$ -
Exercisable, March 31, 2020	0.9	$ 11.28	3.9	$ -

Aggregate intrinsic value represents the difference between the closing price of Modine's common shares on the last trading day of fiscal 2020 over the exercise price of the stock options, multiplied by the number of options outstanding or exercisable. As of March 31, 2020, the exercise price of outstanding options exceeded the closing price of Modine common shares and, as a result, the options had no intrinsic value.

Additional information related to stock options exercised is as follows:

	Years ended March 31,		
	2020	2019	2018
Intrinsic value of stock options exercised	$ 0.1	$ 0.7	$ 4.9
Proceeds from stock options exercised	0.1	1.1	4.3

Restricted Stock: The Company recorded $4.5 million, $4.3 million, and $3.9 million of compensation expense related to restricted stock in fiscal 2020, 2019, and 2018, respectively. The fair value of restricted stock awards that vested during fiscal 2020, 2019, and 2018 was $4.4 million, $4.3 million, and $3.9 million, respectively. At March 31, 2020, the Company had $ 5.1 million of unrecognized compensation expense related to non-vested restricted stock, which it expects to recognize over a weighted-average period of 2.6 years. The Company values restricted stock awards using the closing market price of its common shares on the date of grant. The restricted stock awards vest 25 percent annually for four years, with the exception of awards to non-employee directors, which fully vest upon grant.

A summary of restricted stock activity for fiscal 2020 was as follows:

	Shares	Weighted-average price
Non-vested balance, beginning	0.5	$ 14.95
Granted	0.4	13.54
Vested	(0.3)	14.02
Forfeited	(0.1)	14.99
Non-vested balance, ending	0.5	$ 14.48

Restricted Stock – Performance-Based Shares: The Company recorded $0.8 million, $2.4 million, and $4.4 million of compensation expense related to performance-based stock awards in fiscal 2020, 2019, and 2018, respectively. At March 31, 2020, the Company had $1.1 million of total unrecognized compensation expense related to non-vested performance-based stock awards, which is expected to be recognized over a weighted-average period of 1.9 years. The Company values performance-based stock awards using the closing market price of its common shares on the date of grant.

Shares are earned under the performance portion of the restricted stock award program based upon the attainment of certain financial goals over a three-year period and are awarded after the end of that three-year performance period, if the performance targets have been achieved. The performance components of the programs initiated in fiscal 2020 and 2019 are based upon both a target three-year average consolidated cash flow return on invested capital and a target three-year average annual revenue growth at the end of a three-year performance period, commencing with the fiscal year of grant. The performance components of the program initiated in fiscal 2018 are based upon both a target three-year average consolidated return on capital employed and a target three-year average annual revenue growth at the end of a three-year performance period.

Note 5: Restructuring Activities

During fiscal 2020 and 2019, restructuring actions consisted primarily of targeted headcount reductions and plant consolidation activities. The headcount reductions were primarily in Europe and the Americas within the VTS segment and support the Company's objective to reduce operational and SG&A cost structures. Also, the Company is in the process of transferring product lines to its CIS manufacturing facility in Mexico in order to achieve operational improvements and organizational efficiencies.

During fiscal 2018, the Company ceased production at its Gailtal, Austria manufacturing facility, primarily to reduce excess capacity and lower manufacturing costs in Europe. As a result of this facility closure, the Company recorded $8.3 million of restructuring expenses within the CIS segment, primarily related to employee severance and related benefits. Fiscal 2018 restructuring activities also included plant consolidation activities, targeted headcount reductions, and certain product line transfers in Europe within the VTS segment. In addition, the Company recorded restructuring expenses associated with the discontinuance of its geothermal product line within the BHVAC segment.

During fiscal 2021, the Company approved headcount reductions in the VTS and CIS segments and, as a result, expects to record approximately $4.0 million of severance expenses during the first quarter of fiscal 2021.

Restructuring and repositioning expenses were as follows:

	Years ended March 31,		
	2020	2019	2018
Employee severance and related benefits	$ 10.2	$ 8.7	$ 13.0
Other restructuring and repositioning expenses	2.0	0.9	3.0
Total	$ 12.2	$ 9.6	$ 16.0

Other restructuring and repositioning expenses primarily consist of equipment transfer and plant consolidation costs.

The Company accrues severance in accordance with its written plans, procedures, and relevant statutory requirements. Changes in accrued severance were as follows:

	Years ended March 31,	
	2020	2019
Beginning balance	$ 10.0	$ 11.0
Additions	10.2	8.7
Payments	(15.1)	(9.1)
Effect of exchange rate changes	(0.1)	(0.6)
Ending balance	$ 5.0	$ 10.0

During fiscal 2020, the Company identified potential impairment indicators related to manufacturing facilities in Austria and Germany within the VTS segment. The Company anticipates the future cash flows of these asset groups will be negatively impacted by planned wind downs of certain commercial vehicle and automotive programs. In response, the Company performed an impairment evaluation and recorded asset impairment charges totaling $7.5 million within its VTS segment to write down property and equipment assets to fair value. The Company determined fair value using Level 3 inputs, primarily consisting of appraisals, which considered the market rental value, market conditions, physical condition of the assets, salability in the marketplace and estimated scrap values, based on the specialized nature of the machinery and equipment.

Also during fiscal 2020, the Company recorded a $0.6 million impairment charge to reduce the carrying value of the previously-closed CIS Austrian facility to its current estimated fair value, less costs to sell. During fiscal 2019 and 2018, the Company recorded asset impairment charges of $0.4 million and $1.3 million, respectively, related to this closed facility.

Note 6: Other Income and Expense

Other income and expense consisted of the following:

	Years ended March 31,		
	2020	2019	2018
Equity in earnings of non-consolidated affiliate (a)	$ 0.2	$ 0.7	$ 0.2
Interest income	0.4	0.4	0.4
Foreign currency transactions (b)	(2.4)	(2.3)	(0.6)
Net periodic benefit cost (c)	(3.0)	(2.9)	(3.3)
Total other expense - net	$ (4.8)	$ (4.1)	$ (3.3)

(a) During fiscal 2020, the Company sold its ownership interest in Nikkei Heat Exchanger Company, Ltd. As a result of the sale, the Company recorded a gain of $0.1 million, which is included within the fiscal 2020 amount. See Note 12 for additional information.

(b) Foreign currency transactions primarily consist of foreign currency transaction gains and losses on the re-measurement or settlement of foreign currency-denominated assets and liabilities, including intercompany loans and transactions denominated in a foreign currency, along with gains and losses on foreign currency exchange contracts.

(c) Net periodic benefit cost for the Company's pension and postretirement plans is exclusive of service cost.

Note 7: Income Taxes

The U.S. and foreign components of earnings before income taxes and the provision or benefit for income taxes consisted of the following:

	Years ended March 31,		
	2020	2019	2018
Components of earnings (loss) before income taxes:			
United States	$ (26.1)	$ 22.4	$ 2.5
Foreign	36.5	58.4	60.8
Total earnings before income taxes	$ 10.4	$ 80.8	$ 63.3
Income tax provision (benefit):			
Federal:			
Current	$ (3.4)	$ (20.4)	$ 11.6
Deferred	(1.7)	(4.2)	23.3
State:			
Current	(0.1)	0.7	(0.3)
Deferred	(2.3)	1.9	2.0
Foreign:			
Current	14.9	19.0	16.1
Deferred	5.0	(2.1)	(13.2)
Total income tax provision (benefit)	$ 12.4	$ (5.1)	$ 39.5

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Act. Shortly after the Tax Act was enacted, the SEC issued accounting guidance which provided a one-year measurement period during which a company could complete its accounting for the impacts of the Tax Act. To the extent a company's accounting for certain income tax effects of the Tax Act was incomplete, the company could determine a reasonable estimate for those effects and record a provisional estimate in its financial statements. If a company could not determine a provisional estimate to be included in the financial statements, it was to continue applying the provisions of the tax laws that were in effect immediately prior to the Tax Act being enacted.

During fiscal 2018, the Company recorded provisional discrete tax charges totaling $ 38.0 million related to the Tax Act. The Company adjusted its U.S. deferred tax assets by $19.0 million due to the reduction in the U.S. federal corporate tax rate. This net reduction in deferred tax assets also included the estimated impact on the Company's net state deferred tax assets. In addition, the Company recorded a $19.0 million charge for the transition tax required under the Tax Act.

During fiscal 2019, the Company completed its accounting for the Tax Act, which resulted in an income tax benefit totaling $ 7.7 million. The Company utilized its deferred tax attributes against the transition tax and finalized its fiscal 2018 U.S. federal income tax return. As a result, the Company decreased the provisional charge recorded for the reduction in the U.S. federal corporate tax rate by $9.3 million, since more deferred tax assets were utilized to offset taxable income at a higher fiscal 2018 U.S. federal corporate tax rate. The Company also decreased the transition tax liability to $18.9 million, a reduction of $0.1 million. In addition, the Company recorded a charge of $ 1.7 million for a reduction to state deferred tax assets.

The Tax Act included a new provision designed to tax global intangible low taxed income ("GILTI") starting in fiscal 2019. The Company elected to record the tax effects of the GILTI provision as a period expense in the applicable tax year. To determine whether its net operating loss carryforward deferred tax assets are expected to be realized, the Company considers the applicable tax law ordering. Based upon this approach, net operating loss carryforwards are deemed to be realizable if they will reduce the expected tax liability when utilized, regardless of whether the 50% GILTI deduction or applicable tax credits may have been available.

The Company's accounting policy is to allocate the income tax provision between net earnings and other comprehensive income. The Company applies its accounting for income taxes by tax jurisdiction, and in periods in which there is a loss before income taxes and pre-tax income in other comprehensive income, it first allocates the income tax provision to other comprehensive income, and then records a related tax benefit in the income tax provision.

The reconciliation between the U.S. federal statutory rate and the Company's effective tax rate was as follows:

	Years ended March 31,		
	2020	2019	2018
Statutory federal tax	21.0%	21.0%	31.5%
State taxes, net of federal benefit	(12.0)	3.6	2.9
Taxes on non-U.S. earnings and losses	32.9	3.9	(3.8)
Valuation allowances	156.9	4.0	(5.6)
Tax credits	(36.7)	(26.1)	(17.3)
Compensation	4.0	(0.1)	(0.8)
Tax rate or law changes	3.6	(12.0)	60.1
Uncertain tax positions, net of settlements	(37.9)	0.4	(0.8)
Notional interest deductions	(12.5)	(2.5)	(3.2)
Dividends and taxable foreign inclusions	(11.0)	1.6	0.2
Other	10.9	(0.1)	(0.8)
Effective tax rate	119.2%	(6.3%)	62.4%

During fiscal 2020, the Company recorded net income tax charges totaling $ 2.9 million as a result of legal entity restructuring completed in preparation of a potential sale of the automotive business and a $1.4 million income tax benefit resulting from the recognition of a tax incentive in Italy. Also in fiscal 2020, the Company changed its determination of whether it was more likely than not certain deferred tax assets in the U.S. and in a foreign jurisdiction would be realized and, as a result, adjusted the respective valuation allowances and recorded an income tax charge of $8.4 million and an income tax benefit of $ 1.3 million, respectively. In addition, the Company recorded a net increase of deferred tax asset valuation allowances totaling $9.2 million related to other tax jurisdictions and recorded a $ 4.5 million income tax benefit associated with the reduction in unrecognized tax benefits resulting from a lapse in statutes of limitations and settlements.

During fiscal 2019, the Company recorded income tax benefits totaling $ 7.7 million related to the Tax Act, as discussed above; recorded income tax benefits totaling $14.5 million as a result of amending previous-year tax returns to recognize foreign tax credits that are expected to be realized based upon future sources of income; and recorded a $2.5 million income tax benefit related to a manufacturing deduction in the United States. Also in fiscal 2019, the Company changed its determination of whether it was more likely than not certain deferred tax assets of two separate subsidiaries in a foreign jurisdiction would be realized and, as a result, adjusted the respective valuation allowances and recorded an income tax benefit totaling $1.0 million. In addition, the Company recorded a net increase of deferred tax asset valuation allowances totaling $4.3 million related to other tax jurisdictions and recorded a $ 2.2 million income tax benefit associated with the reduction in unrecognized tax benefits resulting from a lapse in statutes of limitations.

During fiscal 2018, the Company recorded provisional charges totaling $ 38.0 million related to the Tax Act, as discussed above, and recognized a $9.0 million Hungarian development tax credit. Also in fiscal 2018, the Company reversed a portion of the valuation allowance on certain deferred tax assets in a foreign jurisdiction after determining it was more likely than not these assets would be realized, and, as a result, recorded an income tax benefit of $2.8 million. In addition, the Company recorded a $ 1.8 million income tax benefit in fiscal 2018 associated with the reduction in unrecognized tax benefits resulting from a lapse in statutes of limitations.

The Company has recorded valuation allowances against its net deferred tax assets to the extent it has determined it is more likely than not that such assets will not be realized in the future. The Company will maintain the valuation allowances in each applicable tax jurisdiction until it determines it is more likely than not the deferred tax assets will be realized, thereby eliminating the need for a valuation allowance. As further discussed in Note 20, the COVID-19 pandemic has resulted in risks and uncertainties to our business. Future events or circumstances, such as lower taxable income or unfavorable changes in the financial outlook of the Company's operations in certain jurisdictions, could necessitate the establishment of further valuation allowances, which could have a material adverse effect on the Company's results of operations and financial condition.

MODINE MANUFACTURING COMPANY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(In millions, except per share amounts)

The tax effects of temporary differences that gave rise to deferred tax assets and liabilities were as follows:

	March 31,	
	2020	2019
Deferred tax assets:		
Accounts receivable	$ 0.3	$ 0.2
Inventories	4.5	3.4
Plant and equipment	4.7	1.8
Lease liabilities	15.7	-
Pension and employee benefits	45.1	32.7
Net operating and capital losses	70.2	73.5
Credit carryforwards	56.8	60.3
Other, principally accrued liabilities	8.1	10.0
Total gross deferred tax assets	205.4	181.9
Less: valuation allowances	(46.9)	(43.4)
Net deferred tax assets	158.5	138.5
Deferred tax liabilities:		
Plant and equipment	13.1	15.1
Lease assets	15.6	-
Goodwill	4.8	4.8
Intangible assets	26.4	28.8
Other	1.9	0.9
Total gross deferred tax liabilities	61.8	49.6
Net deferred tax assets	$ 96.7	$ 88.9

Unrecognized tax benefits were as follows:

	Years ended March 31,	
	2020	2019
Beginning balance	$ 13.8	$ 13.6
Gross increases - tax positions in prior period	0.3	1.6
Gross decreases - tax positions in prior period	(1.0)	(0.2)
Gross increases - tax positions in current period	1.1	1.1
Settlements	(2.1)	(0.1)
Lapse of statute of limitations	(2.4)	(2.2)
Ending balance	$ 9.7	$ 13.8

The Company's liability for unrecognized tax benefits as of March 31, 2020 was $ 9.7 million, and if recognized, $7.9 million would have an effective tax rate impact. The Company estimates a $0.6 million decrease in unrecognized tax benefits during fiscal 2021 due to lapses in statutes of limitations and settlements. If recognized, these reductions would not have a significant impact on the Company's effective tax rate.

The Company recognizes interest and penalties related to unrecognized tax benefits as a component of income tax expense. During fiscal 2020 and 2019, interest and penalties included within income tax expense in the consolidated statements of operations were not significant. At March 31, 2020 and 2019, accrued interest and penalties totaled $0.5 million and $1.1 million, respectively.

The Company files income tax returns in multiple jurisdictions and is subject to examination by taxing authorities throughout the world. At March 31, 2020, the Company was under income tax examination in a number of jurisdictions. The following tax years remain subject to examination for the Company's major tax jurisdictions:

Germany	Fiscal 2011 - Fiscal 2019
Italy	Calendar 2015 - Fiscal 2019
United States	Fiscal 2017 - Fiscal 2019

At March 31, 2020, the Company had federal and state tax credits of $ 61.6 million that, if not utilized against U.S. taxes, will expire between fiscal 2021 and 2040. The Company also had state and local tax loss carryforwards totaling $ 149.8 million that, if not utilized against state apportioned taxable income, will expire between fiscal 2021 and 2040. In addition, the Company had tax loss and foreign attribute carryforwards totaling $314.7 million in various tax jurisdictions throughout the world. Certain of the carryforwards in the U.S. and in foreign jurisdictions are offset by valuation allowances. If not utilized against taxable income, $8.1 million of these carryforwards will expire between fiscal 2021 and 2034, and $306.6 million, mainly related to Germany and Italy, will not expire due to an unlimited carryforward period.

The Company's practice and intention is to reinvest, with certain insignificant exceptions, the earnings of its non-U.S. subsidiaries outside of the U.S., and therefore, the Company has not recorded foreign withholding taxes or deferred income taxes for these earnings. The Company has estimated the net amount of unrecognized foreign withholding tax and deferred tax liabilities would total approximately $7.0 million if the accumulated foreign earnings were distributed; however, the actual tax cost would be dependent on circumstances existing when remittance occurs.

Note 8: Earnings Per Share

The components of basic and diluted earnings per share were as follows:

	Years ended March 31,		
	2020	2019	2018
Basic Earnings Per Share:			
Net (loss) earnings attributable to Modine	$ (2.2)	$ 84.8	$ 22.2
Less: Undistributed earnings attributable to unvested shares	-	(0.4)	(0.2)
Net (loss) earnings available to Modine shareholders	$ (2.2)	$ 84.4	$ 22.0
Weighted-average shares outstanding - basic	50.8	50.5	49.9
Net (loss) earnings per share - basic	$ (0.04)	$ 1.67	$ 0.44
Diluted Earnings Per Share:			
Net (loss) earnings attributable to Modine	$ (2.2)	$ 84.8	$ 22.2
Less: Undistributed earnings attributable to unvested shares	-	(0.2)	(0.1)
Net (loss) earnings available to Modine shareholders	$ (2.2)	$ 84.6	$ 22.1
Weighted-average shares outstanding - basic	50.8	50.5	49.9
Effect of dilutive securities	-	0.8	1.0
Weighted-average shares outstanding - diluted	50.8	51.3	50.9
Net (loss) earnings per share - diluted	$ (0.04)	$ 1.65	$ 0.43

For fiscal 2020, 2019 and 2018, the calculation of diluted earnings per share excluded 1.1 million, 0.4 million, and 0.2 million stock options, respectively, because they were anti-dilutive. For fiscal 2020 and 2019, the calculation of diluted earnings per share excluded 0.5 million and 0.3 million restricted stock awards, respectively, because they were anti-dilutive. For fiscal 2020, the total number of potentially-dilutive securities was 0.3 million. However, these securities were not included in the computation of diluted net loss per share since to do so would have decreased the loss per share.

Note 9: Cash, Cash Equivalents and Restricted Cash

Cash, cash equivalents and restricted cash consisted of the following:

	March 31,	
	2020	2019
Cash and cash equivalents	$ 70.9	$ 41.7
Restricted cash	0.4	0.5
Total cash, cash equivalents and restricted cash	$ 71.3	$ 42.2

Restricted cash, which is reported within other current assets and other noncurrent assets in the consolidated balance sheets, consists primarily of deposits for contractual guarantees or commitments required for rents, import and export duties, and commercial agreements.

Note 10: Inventories

Inventories consisted of the following:

	March 31,	
	2020	2019
Raw materials	$ 123.6	$ 122.8
Work in process	34.6	32.2
Finished goods	49.2	45.7
Total inventories	$ 207.4	$ 200.7

Note 11: Property, Plant and Equipment

Property, plant and equipment, including depreciable lives, consisted of the following:

	March 31,	
	2020	2019
Land	$ 19.7	$ 20.7
Buildings and improvements (10-40 years)	276.7	285.9
Machinery and equipment (3-15 years)	870.3	848.7
Office equipment (3-10 years)	95.2	92.0
Construction in progress	40.5	57.4
	1,302.4	1,304.7
Less: accumulated depreciation	(854.4)	(820.0)
Net property, plant and equipment	$ 448.0	$ 484.7

Depreciation expense totaled $68.2 million, $67.9 million, and $67.0 million for fiscal 2020, 2019, and 2018, respectively. Gains and losses related to the disposal of property, plant and equipment are recorded within SG&A expenses. For fiscal 2020, 2019, and 2018, losses related to the disposal of property, plant and equipment totaled $0.6 million, $0.9 million, and $0.7 million, respectively.

Note 12: Investment in Affiliate

During fiscal 2020, the Company completed the sale of its 50 percent ownership interest in Nikkei Heat Exchanger Company, Ltd. (“NEX”) for a selling price of $3.8 million. As a result of this sale, the Company recorded a gain of $ 0.1 million, which included the write-off of accumulated foreign currency translation gains of $0.6 million, within other income and expense on the consolidated statement of operations.

Prior to the sale, the Company accounted for its investment in this non-consolidated affiliate using the equity method. The Company included its investment in NEX of $3.8 million within other noncurrent assets on the March 31, 2019 consolidated balance sheet. The Company reported its equity in earnings from NEX within other income and expense in the consolidated statements of operations, using a one-month reporting delay. The Company’s share of NEX’s earnings for fiscal 2020, 2019, and 2018 was $0.1 million, $0.7 million, and $0.2 million, respectively.

Note 13: Intangible Assets

Intangible assets consisted of the following:

	March 31, 2020			March 31, 2019		
	Gross Carrying Value	Accumulated Amortization	Net Intangible Assets	Gross Carrying Value	Accumulated Amortization	Net Intangible Assets
Customer relationships	$ 60.8	$ (12.6)	$ 48.2	$ 61.5	$ (9.1)	$ 52.4
Trade names	58.3	(16.2)	42.1	58.9	(13.5)	45.4
Acquired technology	23.6	(7.6)	16.0	23.9	(5.5)	18.4
Total intangible assets	$ 142.7	$ (36.4)	$ 106.3	$ 144.3	$ (28.1)	$ 116.2

The Company recorded $8.9 million, $9.0 million, and $9.7 million of amortization expense during fiscal 2020, 2019, and 2018, respectively. The Company estimates that it will record $8.4 million of amortization expense in fiscal 2021 and approximately $ 8.0 million of annual amortization expense in fiscal 2022 through 2025.

During fiscal 2018, the BHVAC segment discontinued its geothermal product line and, as a result, recorded a $ 1.2 million impairment charge for acquired technology intangible assets.

Note 14: Goodwill

Changes in the carrying amount of goodwill, by segment and in the aggregate, were as follows:

	VTS	CIS	BHVAC	Total
Balance, March 31, 2018	$ 0.5	$ 158.3	$ 15.0	$ 173.8
Effect of exchange rate changes	-	(4.4)	(0.9)	(5.3)
Balance, March 31, 2019	0.5	153.9	14.1	168.5
Impairment charge	(0.5)	-	-	(0.5)
Effect of exchange rate changes	-	(1.3)	(0.6)	(1.9)
Balance, March 31, 2020	$ -	$ 152.6	$ 13.5	$ 166.1

The Company assesses goodwill for impairment annually, or more frequently if events or circumstances change that would, more likely than not, reduce the fair value of a reporting unit below its carrying value. Annually, the Company conducts its goodwill impairment assessment during the fourth quarter by applying a fair value-based test. For purposes of its assessment, the Company determines the fair value of each reporting unit based upon the present value of estimated future cash flows. The Company's determination of fair value involves judgment and the use of significant estimates and assumptions, including assumptions regarding the revenue growth rates and operating profit margins used to calculate estimated future cash flows, risk-adjusted discount rates, business trends and market conditions.

As a result of its annual goodwill impairment test performed during the fourth quarter of fiscal 2020, the Company determined that the fair value of each of the reporting units within its CIS and BHVAC segments exceeded their respective book values. The Company determined, however, that the goodwill recorded within its VTS segment was fully impaired and recorded a $0.5 million impairment charge as a result. The impairment charge was primarily caused by a recent decline in the estimated fair value of the automotive business within the VTS segment.

At March 31, 2020 and 2019, accumulated goodwill impairment losses totaled $ 40.8 million and $40.3 million, respectively, within the VTS segment.

Note 15: Product Warranties and Other Commitments

Product warranties: Many of the Company's products are covered under a warranty period ranging from one to five years. The Company records a liability for product warranty obligations at the time of sale and adjusts its warranty accruals if it becomes probable that expected claims will differ from previous estimates.

Changes in accrued warranty costs were as follows:

	Years ended March 31,	
	2020	2019
Beginning balance	$ 9.2	$ 9.3
Warranties recorded at time of sale	5.3	5.5
Adjustments to pre-existing warranties	(1.6)	2.2
Settlements	(4.8)	(7.3)
Effect of exchange rate changes	(0.2)	(0.5)
Ending balance	$ 7.9	$ 9.2

Indemnification agreements: From time to time, the Company provides indemnification agreements related to the sale or purchase of an entity or facility. These indemnification agreements cover customary representations and warranties typically provided in conjunction with such transactions, including income, sales, excise or other tax matters, environmental matters and other third-party claims. The indemnification periods provided generally range from less than one year to fifteen years. In addition, standard indemnification provisions reside in many commercial agreements to which the Company is a party and relate to responsibility in the event of potential third-party claims. The fair value of the Company's outstanding indemnification obligations at March 31, 2020 was not material.

Commitments: At March 31, 2020, the Company had capital expenditure commitments of $ 12.0 million. Significant commitments include tooling and equipment expenditures for new and renewal programs with customers in the VTS segment. The Company utilizes inventory arrangements with certain vendors in the normal course of business under which the vendors maintain inventory stock at the Company's facilities or at outside facilities. Title passes to the Company at the time goods are withdrawn for use in production. The Company has agreements with the vendors to use the material within a specific period of time. In some cases, the Company bears the risk of loss for the inventory because Modine is required to insure the inventory against damage and/or theft. This inventory is included within the Company's consolidated balance sheets as raw materials inventory.

Note 16: Leases

Effective April 1, 2019, the Company adopted new lease accounting guidance and, as a result, recorded $ 61.3 million of right-of-use ("ROU") assets and corresponding lease liabilities for operating leases on its consolidated balance sheet. The consolidated financial statements for fiscal 2020 reflect the adoption of this new guidance; however, fiscal 2019, fiscal 2018 and prior-years have not been adjusted. See Note 1 for additional information regarding the Company's adoption of the new guidance.

The Company determines if an arrangement is a lease at contract inception. The lease term begins upon lease commencement, which is when the Company takes possession of the asset, and may include options to extend or terminate the lease when it is reasonably certain that such options will be exercised. The Company uses the lease term within its determination of the appropriate lease classification, either as an operating lease or as a finance lease, and to calculate straight-line lease expense for its operating leases.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The Company recognizes ROU assets and lease liabilities at the commencement date, based upon the present value of lease payments over the lease term. As its lease agreements typically do not provide an implicit interest rate, the Company primarily uses an incremental borrowing rate based upon the information available at lease commencement. In determining the incremental borrowing rate, the Company considers its current collateralized borrowing rate, the term of the lease, and the economic environments where the lease activity is concentrated. The Company believes this method effectively estimates a borrowing rate that it could obtain for a debt instrument with similar terms as the lease agreement.

Based upon its accounting policy, the Company does not separate lease and non-lease components for any asset class. In addition, the Company does not record short-term leases (i.e. leases with an initial term of 12 months or less) on its consolidated balance sheets and recognizes payments for these leases as lease expense.

Certain leases require the Company to pay taxes, insurance, maintenance, and other operating expenses associated with the leased asset. Such amounts are not included in the measurement of the lease liability to the extent they are variable in nature. These variable lease costs are recognized as variable lease expense when incurred. The depreciable life of the ROU assets and related leasehold improvements are limited by the expected lease term, unless the lease contains a provision to transfer title to the Company or a purchase option that the Company expects to execute.

The Company's most significant leases represent leases of real estate, such as manufacturing facilities, warehouses, and office buildings. In addition, the Company leases certain manufacturing and IT equipment and vehicles. The Company's most significant leases have remaining lease terms of 1 to 15 years. Certain leases contain renewal options for varying periods, which are at the Company's discretion. If reasonably certain of exercise, the Company includes the renewal periods within the calculation of ROU assets and lease liabilities. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

Lease Assets and Liabilities: The following table provides a summary of leases recorded on the consolidated balance sheet.

	Balance Sheet Location	March 31, 2020
Lease Assets		
Operating lease ROU assets	Other noncurrent assets	$ 61.4
Finance lease ROU assets (a)	Property, plant and equipment - net	8.5
Lease Liabilities		
Operating lease liabilities	Other current liabilities	$ 10.9
Operating lease liabilities	Other noncurrent liabilities	50.3
Finance lease liabilities	Long-term debt - current portion	0.4
Finance lease liabilities	Long-term debt	3.3

(a) Finance lease ROU assets were recorded net of accumulated amortization of $ 1.8 million as of March 31, 2020.

Components of Lease Expense: The Company records operating lease expense as either cost of sales or SG&A expenses within its consolidated statements of operations, depending upon the nature and use of the ROU assets. The Company records finance lease expense as depreciation expense within cost of sales or SG&A expenses, depending upon the nature and use of the ROU assets, and as interest expense in its consolidated statements of operations.

The components of lease expense were as follows:

	Year ended March 31, 2020
Operating lease expense (a)	$ 21.2
Finance lease expense:	
Depreciation of ROU assets	0.5
Interest on lease liabilities	0.2
Total lease expense	$ 21.9

(a) In fiscal 2020, operating lease expense included short-term lease expense of $ 4.1 million. Variable lease expense was not significant.

Supplemental Cash Flow Information

	Year ended March 31, 2020
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows for operating leases	$ 14.7
Financing cash flows for finance leases	0.5
ROU assets obtained in exchange for lease liabilities	
Operating leases	$ 9.0
Finance leases	0.2

Lease Term and Discount Rates

	March 31, 2020
Weighted-average remaining lease term:	
Operating leases	9.3 years
Finance leases	8.8 years
Weighted-average discount rate:	
Operating leases	3.5%
Finance leases	4.7%

Maturity of Lease Liabilities under New Lease Accounting Guidance: Future minimum rental payments for leases with initial non-cancellable lease terms in excess of one year were as follows at March 31, 2020:

Fiscal Year	Operating Leases	Finance Leases
2021	$ 12.8	$ 0.5
2022	11.4	0.5
2023	9.3	0.5
2024	6.3	0.5
2025	5.8	0.5
2026 and beyond	26.2	2.0
Total lease payments	71.8	4.5
Less: Interest	(10.6)	(0.8)
Present value of lease liabilities	$ 61.2	$ 3.7

Maturity of Lease Liabilities under Previous Lease Accounting Guidance: Future minimum rental payments for operating leases with initial non-cancellable lease terms in excess of one year were as follows at March 31, 2019:

Fiscal Year	
2020	$ 14.2
2021	12.4
2022	9.1
2023	7.1
2024	4.7
2025 and beyond	22.9
Total	$ 70.4

The Company recorded $19.3 million and $18.5 million of rental expense related to operating leases in fiscal 2019 and 2018, respectively.

Note 17: Indebtedness

In June 2019, the Company executed the Fourth Amended and Restated Credit Agreement with a syndicate of banks that provides for a multi-currency $250.0 million revolving credit facility expiring in June 2024, which modified the Company's then-existing revolver that would have expired in November 2021. In addition, this credit agreement provided for both U.S. dollar- and euro-denominated term loan facilities, with repayments continuing into fiscal 2025. These term loans replaced the previously-existing term loans with repayments scheduled through fiscal 2022. As a result of the credit agreement modification, the Company deferred debt issuance costs of $1.1 million, which are being amortized over the term of the debt. Borrowings under both the revolving credit and term loan facilities bear interest at a variable rate, based upon the applicable reference rate and including a margin percentage dependent upon the Company's leverage ratio, as described below. At March 31, 2020, the weighted-average interest rates for revolving credit facility borrowings and the term loans were 3.0 percent and 2.8 percent, respectively. At March 31, 2020, the Company's revolving credit facility borrowings totaled $ 127.2 million and domestic letters of credit totaled $5.3 million, resulting in available borrowings under the revolving credit facility of $ 117.5 million.

In January 2020, the Company issued $100.0 million of 5.9 percent Senior Notes with repayments ending in fiscal 2029. The Company used the majority of the proceeds to satisfy the remaining principal balance of the 6.8 percent Senior Notes, which were scheduled to mature in August 2020. As a result of the credit agreement modification, the Company deferred debt issuance costs of $1.7 million, which are being amortized over the term of the debt.

Based upon the terms of the credit agreement, the Company determined that borrowings under its revolving credit facility should be classified as long-term debt. Accordingly, the Company has reclassified borrowings of $47.1 million under its revolving credit facility from short-term to long-term debt on the March 31, 2019 balance sheet and within the related disclosures.

Long-term debt consisted of the following:

	Fiscal year of maturity	March 31, 2020	March 31, 2019
Term loans	2025	$ 189.4	$ 238.4
Revolving credit facility	2025	127.2	47.1
5.9% Senior Notes	2029	100.0	-
5.8% Senior Notes	2027	50.0	50.0
6.8% Senior Notes	2021	-	85.0
Other (a)		6.0	14.3
		472.6	434.8
Less: current portion		(15.6)	(48.6)
Less: unamortized debt issuance costs		(5.0)	(4.0)
Total long-term debt		$ 452.0	$ 382.2

(a) Other long-term debt primarily includes borrowings by foreign subsidiaries and finance lease obligations.

Long-term debt matures as follows:

Fiscal Year	
2021	$ 15.6
2022	21.7
2023	21.7
2024	21.7
2025	273.6
2026 & beyond	118.3
Total	$ 472.6

The Company also maintains credit agreements for its foreign subsidiaries, with outstanding short-term borrowings at March 31, 2020 and 2019 of $14.8 million and $18.9 million, respectively.

Provisions in the Company's credit agreement, Senior Note agreements, and various foreign credit agreements require the Company to maintain compliance with various covenants and include certain cross-default clauses. Under its primary credit agreements in the U.S., the Company has provided liens on substantially all domestic assets. Also, as specified in the credit agreement, the term loans may require prepayments in the event of certain asset sales. In addition, at the time of each incremental borrowing under the revolving credit facility, the Company is required to represent to the lenders that there has been no material adverse effect, as defined in the credit agreement, on its business, property, or results of operations.

The Company is subject to a leverage ratio covenant, which requires the Company to limit its consolidated indebtedness, less a portion of its cash balance, both as defined by the credit agreements, in relation to its consolidated net earnings before interest, taxes, depreciation, amortization, and certain other adjustments ("Adjusted EBITDA"). The leverage ratio covenant limit was 3.25 to 1 through the fourth quarter of fiscal 2020. The Company is also subject to an interest expense coverage ratio covenant, which requires the Company to maintain Adjusted EBITDA of at least three times consolidated interest expense. The Company was in compliance with its debt covenants as of March 31, 2020.

In May 2020, the Company executed amendments to its primary credit agreements in the U.S. Under the amended agreements, the leverage ratio covenant limit is temporarily raised. The leverage ratio covenant limit in fiscal 2021 is 4.00 to 1, 4.75 to 1, 5.25 to 1, and 5.75 to 1 for the first, second, third, and fourth quarters, respectively. In fiscal 2022, the leverage ratio covenant limit is 4.75 to 1, 3.75 to 1, and 3.50 to 1 for the first, second and third quarters, respectively, and subsequently returns to 3.25 to 1 for the fourth quarter of fiscal 2022.

The Company estimates the fair value of long-term debt using discounted future cash flows at rates offered to the Company for similar debt instruments of comparable maturities. As of March 31, 2020 and 2019, the carrying value of the Company's long-term debt approximated fair value, with the exception of the Senior Notes, which had an aggregate fair value of approximately $131.3 million and $137.2 million, respectively. The fair value of the Company's long-term debt is categorized as Level 2 within the fair value hierarchy. Refer to Note 3 for the definition of a Level 2 fair value measurement.

Note 18: Pension and Employee Benefit Plans

Defined Contribution Employee Benefit Plans:

The Company maintains a domestic 401(k) plan that allows employees to contribute a portion of their salary to help them save for retirement. The Company currently matches employee contributions up to 4.5 percent of their compensation for participants. The Company's expense for defined contribution employee benefit plans during fiscal 2020, 2019, and 2018 was $6.6 million, $6.4 million, and $5.2 million, respectively.

In addition, the Company maintains non-qualified deferred compensation plans for eligible employees, and various non-U.S. subsidiaries have government-required defined contribution plans in place, under which they contribute a percentage of employee earnings into accounts, consistent with local laws.

Statutory Termination Plans:

Certain non-U.S. subsidiaries have statutory termination indemnity plans covering eligible employees. The benefits under these plans are based upon years of service and final average compensation levels or a monthly retirement benefit amount. These programs are substantially unfunded in accordance with local laws.

Defined Benefit Employee Benefit Plans:

Pension plans: The Company maintains non-contributory defined benefit pension plans that cover eligible domestic employees. These plans are closed to new participants. The primary domestic plans cover most domestic employees hired on or before December 31, 2003 and provide benefits based primarily upon years of service and average compensation for salaried and some hourly employees. Benefits for other hourly employees are based upon a monthly retirement benefit amount. Currently, the Company's domestic pension plans do not include increases in annual earnings or future service in calculating the average annual earnings and years of credited service under the pension plan benefit formula. Certain non-U.S. subsidiaries of the Company also have legacy defined benefit plans which cover a smaller number of active employees and are substantially unfunded. The primary non-U.S. plans are maintained in Germany, Austria, and Italy and are closed to new participants.

The Company contributed $3.5 million, $8.0 million, and $13.4 million to its U.S. pension plans during fiscal 2020, 2019, and 2018, respectively. In addition, the Company contributed $2.3 million, $5.9 million, and $2.6 million to its non-U.S. pension plans during fiscal 2020, 2019, and 2018, respectively. These contributions are reported in the change in other liabilities in the consolidated statements of cash flows.

Postretirement plans: The Company provides selected healthcare and life insurance benefits for eligible retired domestic employees. The Company periodically amends these unfunded plans to change the contribution rate of retirees and the amounts and forms of coverage. An annual limit on the Company's cost is defined for the majority of these plans. The Company's net periodic income for its postretirement plans during fiscal 2020, 2019, and 2018 was $0.3 million, $0.3 million, and $0.2 million, respectively.

Measurement date: The Company uses March 31 as the measurement date for its pension and postretirement plans.

Changes in benefit obligations and plan assets, as well as the funded status of the Company's global pension plans, were as follows:

	Years ended March 31,	
	2020	**2019**
Change in benefit obligation:		
Benefit obligation at beginning of year	$ 258.8	$ 273.6
Service cost	0.4	0.5
Interest cost	9.1	9.6
Actuarial loss	15.5	1.7
Benefits paid	(18.2)	(22.8)
Curtailment gain (a)	(0.3)	-
Effect of exchange rate changes	(0.6)	(3.8)
Benefit obligation at end of year	$ 264.7	$ 258.8
Change in plan assets:		
Fair value of plan assets at beginning of year	$ 155.1	$ 157.7
Actual return on plan assets	(11.6)	6.3
Benefits paid	(18.2)	(22.8)
Employer contributions	5.8	13.9
Fair value of plan assets at end of year	$ 131.1	$ 155.1
Funded status at end of year	$ (133.6)	$ (103.7)
Amounts recognized in the consolidated balance sheets:		
Current liability	$ (2.7)	$ (2.0)
Noncurrent liability	(130.9)	(101.7)
	$ (133.6)	$ (103.7)

(a) The $0.3 million curtailment gain, which is associated with headcount reductions in Europe within the VTS segment, will be recognized as a component of net periodic benefit cost following the completion of the headcount reductions. See Note 5 for additional information on the Company's restructuring activities.

As of March 31, 2020, 2019, and 2018, the benefit obligation associated with the Company's non-U.S. pension plans totaled $ 35.7 million, $36.5 million, and $43.4 million respectively. In fiscal 2020, the $ 0.8 million decrease primarily resulted from employer contributions of $ 2.2 million for benefits paid to plan participants during the year, partially offset by service and interest cost totaling $0.9 million. In fiscal 2019, the $6.9 million decrease primarily resulted from employer contributions of $ 5.9 million for benefits paid to plan participants during the year and the impact of foreign currency exchange rate changes, partially offset by service and interest cost totaling $1.1 million.

The accumulated benefit obligation for pension plans was $263.1 million and $256.9 million as of March 31, 2020 and 2019, respectively. The net actuarial loss related to the pension plans recognized in accumulated other comprehensive loss was $191.5 million and $159.1 million as of March 31, 2020 and 2019, respectively.

Costs for the Company's global pension plans included the following components:

	Years ended March 31,		
	2020	2019	2018
Components of net periodic benefit cost:			
Service cost	$ 0.4	$ 0.5	$ 0.5
Interest cost	9.1	9.6	9.9
Expected return on plan assets	(12.0)	(12.3)	(11.9)
Amortization of net actuarial loss	6.0	5.6	5.6
Settlements (a)	0.2	0.2	0.3
Curtailment gain (a)	-	-	(0.3)
Net periodic benefit cost	$ 3.7	$ 3.6	$ 4.1
Other changes in benefit obligation recognized in other comprehensive income (loss):			
Net actuarial loss	$ (38.7)	$ (7.7)	$ (5.8)
Amortization of net actuarial loss	6.2	5.8	5.9
Total recognized in other comprehensive income (loss)	$ (32.5)	$ (1.9)	$ 0.1

(a) The settlement charges and curtailment gain resulted from activity associated with the Company's non-U.S. pension plans.

The Company amortized $6.2 million, $5.6 million, and $5.6 million of net actuarial loss in fiscal 2020, 2019, and 2018, respectively. In each of these years, less than $1.0 million of the amortization was attributable to the Company's non-U.S. pension plans. The Company estimates $6.9 million of net actuarial loss for its pension plans will be amortized from accumulated other comprehensive loss into net periodic benefit cost during fiscal 2021. The fiscal 2021 estimated amortization includes less than $1.0 million related to the Company's non-U.S. pension plans.

The Company used a discount rate of 3.4% and 4.0% as of March 31, 2020 and 2019, respectively, for determining its benefit obligations under its U.S. pension plans. The Company used a weighted-average discount rate of 1.0% and 1.4% as of March 31, 2020 and 2019, respectively, for determining its benefit obligations under its non-U.S. pension plans. The Company used a discount rate of 4.0%, 4.0%, and 4.1% to determine its costs under its U.S. pension plans for fiscal 2020, 2019, and 2018, respectively. The Company used a weighted-average discount rate of 1.7%, 1.9%, and 1.9% to determine its costs under its non-U.S. pension plans for fiscal 2020, 2019, and 2018, respectively. The Company determined the discount rates used for its U.S. pension plans by modeling a portfolio of high-quality corporate bonds, with appropriate consideration given to expected defined benefit payment terms and duration of the respective pension obligations. The Company used a similar process to determine the discount rate for its non-U.S. pension obligations.

Plan assets in the Company's U.S. pension plans comprise 100 percent of the Company's world-wide pension plan assets. The Company's U.S. pension plan weighted-average asset allocations at the measurement dates of March 31, 2020 and 2019 were as follows:

	Target allocation	Plan assets	
		2020	2019
Equity securities	65%	60%	66%
Debt securities	21%	22%	19%
Real estate investments	13%	16%	12%
Cash and cash equivalents	1%	2%	3%
	100%	100%	100%

Due to market conditions and other factors, including timing of benefit payments and other transactions, actual asset allocation may vary from the target allocation outlined above. The Company periodically rebalances the assets to the target allocations. As of March 31, 2020 and 2019, the Company's pension plans did not directly own shares of Modine common stock.

The Company employs a total return investment approach, whereby a mix of investments are used to maximize the long-term growth of principal, while avoiding excessive risk. The Company has established pension plan guidelines based upon an evaluation of market conditions, tolerance for risk and cash requirements for benefit payments. The Company measures and monitors investment risk on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements and periodic asset/liability studies.

The expected rate of return on U.S. plan assets is based upon historical return experience and forward-looking return expectations for major asset class categories. For fiscal 2020, 2019, and 2018 U.S. pension plan expense, the expected rate of return on plan assets was 7.5 percent. For fiscal 2021 U.S. pension plan expense, the Company has assumed a rate of return on plan assets of 7.5 percent.

The Company's funding policy for its U.S. pension 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. The Company expects to contribute approximately $20 million to these U.S. plans during fiscal 2021.

Estimated pension benefit payments for the next ten fiscal years are as follows:

Fiscal Year	Estimated Pension Benefit Payments
2021	$ 17.2
2022	16.8
2023	16.7
2024	16.7
2025	16.8
2026-2030	80.6

Note 19: Derivative Instruments

The Company uses derivative financial instruments from time to time as a tool to manage certain financial risks. The Company's policy prohibits the use of leveraged derivatives. Accounting for derivatives and hedging activities requires derivative financial instruments to be measured at fair value and recognized as assets or liabilities in the consolidated balance sheets. Accounting for the gain or loss resulting from the change in fair value of the derivative financial instruments depends on whether it has been designated as a hedge, and, if so, on the nature of the hedging activity.

Commodity derivatives: The Company periodically enters into over-the-counter forward contracts related to forecasted purchases of aluminum and copper. The Company's strategy in entering into these contracts is to reduce its exposure to changing market prices of these commodities. The Company designates certain commodity forward contracts as cash flow hedges for accounting purposes. Accordingly, for these designated hedges, the Company records unrealized gains and losses related to the change in the fair value of the contracts in accumulated other comprehensive income (loss) ("AOCI") within shareholders' equity and subsequently recognizes the gains and losses within cost of sales as the underlying inventory is sold.

Foreign exchange contracts: The Company's foreign exchange risk management strategy uses derivative financial instruments to mitigate foreign currency exchange risk. The Company periodically enters into foreign currency forward contracts to hedge specific foreign currency-denominated assets and liabilities as well as forecasted transactions. The Company designates certain hedges of forecasted transactions as cash flow hedges for accounting purposes. Accordingly, for these designated hedges, the Company records unrealized gains and losses related to the change in the fair value of the contracts in AOCI within shareholders' equity and subsequently recognizes the gains and losses as a component of earnings at the same time and in the same financial statement line that the underlying transactions impact earnings. The Company has not designated forward contracts related to foreign currency-denominated assets and liabilities as hedges. Accordingly, for these non-designated contracts, the Company records unrealized gains and losses related to changes in fair value in other income and expense. Gains and losses on these foreign currency contracts are offset by foreign currency gains and losses associated with the related assets and liabilities.

The fair value of the Company's derivative financial instruments recorded in the consolidated balance sheets were as follows:

	Balance Sheet Location	March 31, 2020	March 31, 2019
Derivatives designated as hedges:			
Commodity derivatives	Other current assets	$ -	$ 0.6
Commodity derivatives	Other current liabilities	1.3	0.3
Foreign exchange contracts	Other current assets	0.1	0.2
Derivatives not designated as hedges:			
Foreign exchange contracts	Other current liabilities	$ -	$ 0.5

The amounts associated with derivative financial instruments that the Company designated for hedge accounting were as follows:

	Gain (loss) recognized in other comprehensive income			Statement of Operations	Gain (loss) reclassified from AOCI		
	2020	2019	2018	Location	2020	2019	2018
Commodity derivatives	$ (2.6)	$ (0.3)	$ 0.2	Cost of sales	$ (0.8)	$ (0.4)	$ -
Foreign exchange contracts	(0.1)	(0.4)	0.1	Net sales	(0.1)	(0.4)	0.1
Foreign exchange contracts	0.2	1.0	-	Cost of sales	0.4	0.6	-
Total gains (losses)	$ (2.5)	$ 0.3	$ 0.3		$ (0.5)	$ (0.2)	$ 0.1

The amounts associated with derivative financial instruments that the Company did not designate for hedge accounting were as follows:

	Statement of Operations Location	Years ended March 31,		
		2020	2019	2018
Commodity derivatives	Cost of sales	$ -	$ -	$ 0.4
Foreign exchange contracts	Net sales	(0.1)	(0.7)	(0.1)
Foreign exchange contracts	Other income (expense) - net	(0.1)	(0.3)	(0.5)
Total losses		$ (0.2)	$ (1.0)	$ (0.2)

Note 20: Risks, Uncertainties, Contingencies and Litigation

COVID-19

In March 2020, the World Health Organization declared the outbreak of the novel coronavirus, COVID-19, a pandemic. The spread of COVID-19 and the resulting work and travel restrictions, including international border closings, have disrupted, and may continue to disrupt, global supply chains and have negatively impacted the global economy. As a result of this pandemic, the Company has experienced significant impacts on its operations and has suspended production at certain manufacturing facilities in China, India, Italy, Spain, Germany, the Netherlands, Austria, Hungary, the U.S., Mexico and Brazil due to local government requirements or customer shutdowns and is operating other facilities in the U.S. and abroad at reduced capacity levels. Although the temporarily-closed facilities have since reopened, many are operating at a significantly reduced volume because of low customer demand. The Company is focused on protecting the health and wellbeing of its employees and the communities in which it operates, while also ensuring the continuity of its business operations and timely delivery of quality products and services to its customers. Beginning largely in April 2020 and in an effort to mitigate the negative impacts of COVID-19, the Company has taken actions, including, but not limited to, production staffing adjustments, furloughs, shortened work weeks, and temporary salary reductions at all levels of our organization. In addition, the Company is focused on reducing operating and administrative expenses.

The Company's consolidated financial statements reflect estimates and assumptions made by management, including assumptions regarding the future impacts of the COVID-19 pandemic, that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and reported amounts of revenue and expenses during the reporting periods presented. For example, assets particularly sensitive to assumptions that could be adversely impacted by the COVID-19 pandemic include goodwill and deferred tax assets. While the Company believes it used appropriate estimates and assumptions to prepare the consolidated financial statements, actual amounts could differ materially and future events or circumstances could have a potential negative effect on the assumptions used. If the Company, its suppliers, or its customers experience further shutdowns or other significant business disruptions associated with the COVID-19 pandemic, its ability to conduct business in the manner and on the timelines presently planned could be materially and negatively impacted, which could have a material adverse effect on the Company's business, financial position, results of operations and cash flows.

Market Risk

The Company sells a broad range of products that provide thermal solutions to customers operating in diverse markets, including the automotive, commercial vehicle, off-highway, and commercial, industrial, and building HVAC&R markets. The COVID-19 pandemic has negatively impacted these markets; the duration and severity of the impacts of COVID-19 on these markets are currently uncertain.

Credit Risk
The Company invests excess cash primarily in investment quality, short-term liquid debt instruments. Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of accounts receivable. The Company sells a broad range of products that provide thermal solutions to customers operating throughout the world. In fiscal 2020, one customer within the VTS segment accounted for more than ten percent of the Company's total sales. In fiscal 2019 and 2018, two customers within the VTS segment each accounted for ten percent or more of the Company's total sales. Sales to the Company's top ten customers were 45 percent, 50 percent, and 48 percent of total sales in fiscal 2020, 2019, and 2018, respectively. At March 31, 2020 and 2019, 34 percent and 38 percent, respectively, of the Company's trade accounts receivable were due from the Company's top ten customers. These customers operate primarily in the automotive, commercial vehicle, off-highway, data center cooling and commercial air conditioning markets. Collateral or advanced payments are generally not required. The Company has not experienced significant credit losses to customers in the markets served nor has experienced a significant increase in credit losses in connection with the COVID-19 pandemic.

The Company manages credit risk through its focus on the following:

- Cash and investments – reviewing cash deposits and short-term investments to ensure banks have credit ratings acceptable to the Company and that short-term investments are maintained in secured or guaranteed instruments;
- Accounts receivable – performing periodic customer credit evaluations and actively monitoring their financial condition and applicable business news;
- Pension assets – ensuring that investments within pension plans provide appropriate diversification, monitoring of investment teams, ensuring that portfolio managers adhere to the Company's investment policies and directives, and ensuring that exposure to high risk investments is limited; and
- Insurance – ensuring that insurance providers maintain financial ratings that are acceptable to the Company.

Counterparty Risk
The Company manages counterparty risk through its focus on the following:

- Customers – performing thorough reviews of customer credit reports and accounts receivable aging reports by internal credit committees;
- Suppliers – maintaining a supplier risk management program and utilizing industry sources to identify and mitigate high risk situations; and
- Derivatives – ensuring that counterparties to derivative instruments maintain credit ratings that are acceptable to the Company.

Environmental
The Company has recorded environmental investigation and remediation accruals related to soil and groundwater contamination at manufacturing facilities in the United States, one of which the Company currently owns and operates, and at its former manufacturing facility in the Netherlands, along with accruals for lesser environmental matters at certain other facilities in the United States and Brazil. These accruals generally relate to facilities where past operations followed practices and procedures that were considered acceptable under then-existing regulations, or where the Company is a successor to the obligations of prior owners, and current laws and regulations require investigative and/or remedial work to ensure sufficient environmental compliance. The accruals for these environmental matters totaled $18.2 million and $18.9 million at March 31, 2020 and 2019, respectively. As additional information becomes available, the Company will re-assess the liabilities related to these matters and revise the estimated accruals, if necessary. Based upon currently available information, the Company believes the ultimate outcome of these matters, individually and in the aggregate, will not have a material adverse effect on its financial position. However, these matters are subject to inherent uncertainties, and unfavorable outcomes could occur, including significant monetary damages.

Other Litigation
In the normal course of business, the Company and its subsidiaries are named as defendants in various lawsuits and enforcement proceedings by private parties, governmental agencies and/or others in which claims are asserted against Modine. The Company believes that any additional loss in excess of amounts already accrued would not have a material effect on the Company's consolidated balance sheet, results of operations, and cash flows. In addition, management expects that the liabilities which may ultimately result from such lawsuits or proceedings, if any, would not have a material adverse effect on the Company's financial position.

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Note 21: Accumulated Other Comprehensive Loss

Changes in accumulated other comprehensive loss were as follows:

	Foreign Currency Translation	Defined Benefit Plans	Cash Flow Hedges	Total
Balance, March 31, 2019	$ (42.6)	$ (136.3)	$ 0.5	$ (178.4)
Other comprehensive loss before reclassifications	(18.2)	(38.7)	(2.5)	(59.4)
Reclassifications:				
Amortization of unrecognized net loss (a)	-	5.8	-	5.8
Realized losses - net (b)	-	-	0.5	0.5
Foreign currency translation gains (c)	(0.6)	-	-	(0.6)
Income taxes	-	8.3	0.5	8.8
Total other comprehensive loss	(18.8)	(24.6)	(1.5)	(44.9)
Balance, March 31, 2020	$ (61.4)	$ (160.9)	$ (1.0)	$ (223.3)

	Foreign Currency Translation	Defined Benefit Plans	Cash Flow Hedges	Total
Balance, March 31, 2018	$ (5.5)	$ (134.9)	$ 0.1	$ (140.3)
Other comprehensive income (loss) before reclassifications	(37.9)	(7.1)	0.3	(44.7)
Reclassifications:				
Amortization of unrecognized net loss (a)	-	5.4	-	5.4
Realized losses - net (b)	-	-	0.2	0.2
Foreign currency translation losses (d)	0.8	-	-	0.8
Income taxes	-	0.3	(0.1)	0.2
Total other comprehensive income (loss)	(37.1)	(1.4)	0.4	(38.1)
Balance, March 31, 2019	$ (42.6)	$ (136.3)	$ 0.5	$ (178.4)

(a) Amounts are included in the calculation of net periodic benefit cost for the Company's defined benefit plans, which include pension and other postretirement plans. See Note 18 for additional information about the Company's pension plans.
(b) Amounts represent net gains and losses associated with cash flow hedges that were reclassified to net earnings. See Note 19 for additional information regarding derivative instruments.
(c) As a result of the sale of its investment in NEX during fiscal 2020, the Company wrote off $ 0.6 million of accumulated foreign currency translation gains.
(d) As a result of the sale of a business in South Africa during fiscal 2019, the Company wrote off $ 0.8 million of accumulated foreign currency translation losses.

Note 22: Segment and Geographic Information

The Company's product lines consist of heat-transfer components and systems. The Company serves vehicular and commercial, industrial, and building HVAC&R markets.

The Company's VTS segment represents its vehicular business and primarily serves the automotive, commercial vehicle, and off-highway markets. In addition, the VTS segment serves the automotive and commercial vehicle aftermarket in Brazil. The Company's CIS segment provides coils, coolers, and coating solutions to customers throughout the world. The Company's BHVAC segment provides heating, ventilating and air conditioning products to customers throughout the world.

Each operating segment is managed by a vice president and has separate financial results reviewed by the Company's chief operating decision maker. These results are used by management in evaluating the performance of each segment and in making decisions on the allocation of resources among the Company's various businesses.

Effective April 1, 2020, the Company began managing its automotive business separate from the other businesses within the VTS segment. The Company is managing the automotive business as a separate segment as the Company targets the sale or eventual exit of the businesses in this segment. Beginning for fiscal 2021, the Company will report the financial results for the automotive business as the Automotive segment. The remaining portion of the previous VTS segment will be named the Heavy-Duty Equipment segment and will include the heavy-duty commercial vehicle and off-highway businesses.

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The following is a summary of net sales, gross profit, and operating income by segment:

	Year ended March 31, 2020		
	External Sales	Inter-segment Sales	Total
Net sales:			
VTS	$ 1,136.0	$ 41.2	$ 1,177.2
CIS	620.1	3.8	623.9
BHVAC	219.4	1.7	221.1
Segment total	1,975.5	46.7	2,022.2
Corporate and eliminations	-	(46.7)	(46.7)
Net sales	$ 1,975.5	$ -	$ 1,975.5

	Year ended March 31, 2019		
	External Sales	Inter-segment Sales	Total
Net sales:			
VTS	$ 1,298.9	$ 52.8	$ 1,351.7
CIS	704.7	2.9	707.6
BHVAC	209.1	3.3	212.4
Segment total	2,212.7	59.0	2,271.7
Corporate and eliminations	-	(59.0)	(59.0)
Net sales	$ 2,212.7	$ -	$ 2,212.7

	Year ended March 31, 2018		
	External Sales	Inter-segment Sales	Total
Net sales:			
VTS	$ 1,239.3	$ 56.4	$ 1,295.7
CIS	674.4	1.3	675.7
BHVAC	189.4	1.8	191.2
Segment total	2,103.1	59.5	2,162.6
Corporate and eliminations	-	(59.5)	(59.5)
Net sales	$ 2,103.1	$ -	$ 2,103.1

Inter-segment sales are accounted for based upon an established markup over production costs. Net sales for Corporate and eliminations primarily represent the elimination of inter-segment sales.

	Years ended March 31,					
	2020		2019		2018	
Gross profit:	$'s	% of sales	$'s	% of sales	$'s	% of sales
VTS	$ 144.9	12.3%	$ 186.9	13.8%	$ 201.0	15.5%
CIS	92.9	14.9%	114.9	16.2%	97.8	14.5%
BHVAC	71.5	32.3%	63.4	29.9%	58.0	30.3%
Segment total	309.3	15.3%	365.2	16.1%	356.8	16.5%
Corporate and eliminations	(1.8)	-	0.3	-	(0.3)	-
Gross profit	$ 307.5	15.6%	$ 365.5	16.5%	$ 356.5	17.0%

	Years ended March 31,		
Operating income:	2020	2019	2018
VTS	$ 27.6	$ 64.8	$ 84.2
CIS	32.9	53.4	28.5
BHVAC	36.4	26.9	20.3
Segment total	96.9	145.1	133.0
Corporate and eliminations (a)	(59.0)	(35.4)	(40.8)
Operating income	$ 37.9	$ 109.7	$ 92.2

(a) The operating loss for Corporate includes certain research and development costs, legal, finance and other general corporate and central services expenses, and other costs that are either not directly attributable to an operating segment or not considered when management evaluates segment performance. During fiscal 2020 and 2019, the Company recorded $39.2 million and $7.1 million, respectively, of costs directly associated with its review of strategic alternatives for the VTS segment's automotive business, including costs to separate and prepare the business for potential sale.

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The following is a summary of total assets by segment:

	March 31,	
	2020	2019
VTS	$ 683.9	$ 749.9
CIS	617.7	604.2
BHVAC	102.3	89.4
Corporate and eliminations	132.2	94.5
Total assets	$ 1,536.1	$ 1,538.0

The following is a summary of capital expenditures and depreciation and amortization expense by segment:

	Years ended March 31,		
Capital expenditures:	2020	2019	2018
VTS	$ 53.2	$ 56.2	$ 61.4
CIS	15.0	16.4	9.0
BHVAC	3.1	1.3	0.6
Total capital expenditures	$ 71.3	$ 73.9	$ 71.0

	Years ended March 31,		
Depreciation and amortization expense:	2020	2019	2018
VTS	$ 49.7	$ 49.5	$ 48.2
CIS	24.0	23.9	24.3
BHVAC	3.4	3.5	4.2
Total depreciation and amortization expense	$ 77.1	$ 76.9	$ 76.7

The following is a summary of net sales by geographical area, based upon the location of the selling unit:

	Years ended March 31,		
	2020	2019	2018
United States	$ 941.9	$ 1,032.3	$ 911.4
Italy	187.4	217.3	211.5
China	168.5	172.1	156.0
Hungary	142.4	165.6	153.9
Germany	97.5	123.1	132.6
Austria	93.0	116.2	151.7
Other	344.8	386.1	386.0
Net sales	$ 1,975.5	$ 2,212.7	$ 2,103.1

The following is a summary of property, plant and equipment by geographical area:

	March 31,	
	2020	2019
United States	$ 114.6	$ 117.7
China	56.8	57.6
Hungary	55.4	55.3
Mexico	50.0	56.3
Italy	49.8	52.4
Germany	27.0	32.8
Austria	26.0	36.9
Other	68.4	75.7
Total property, plant and equipment	$ 448.0	$ 484.7

The following is a summary of net sales by end market:

	Years ended March 31,		
	2020	2019	2018
Commercial HVAC&R	$ 639.7	$ 674.0	$ 648.3
Automotive	508.8	542.8	526.0
Commercial vehicle	323.7	387.6	381.7
Off-highway	253.9	314.1	271.2
Data center cooling	150.2	187.0	137.6
Industrial cooling	43.5	47.8	67.6
Other	55.7	59.4	70.7
Net sales	$ 1,975.5	$ 2,212.7	$ 2,103.1

MODINE MANUFACTURING COMPANY
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Note 23: Quarterly Financial Data (Unaudited)

The following is a summary of quarterly financial data:

	Fiscal 2020 quarters ended				
	June	Sept.	Dec.	March	Fiscal 2020
Net sales	$ 529.0	$ 500.2	$ 473.4	$ 472.9	$ 1,975.5
Gross profit	83.4	75.7	73.5	74.9	307.5
Net earnings (loss) (a)	8.2	(4.8)	1.0	(6.4)	(2.0)
Net earnings (loss) attributable to Modine (a)	8.0	(4.7)	1.2	(6.7)	(2.2)
Net earnings (loss) per share attributable to Modine shareholders:					
Basic	$ 0.16	$ (0.09)	$ 0.02	$ (0.13)	$ (0.04)
Diluted	0.16	(0.09)	0.02	(0.13)	(0.04)

	Fiscal 2019 quarters ended				
	June	Sept.	Dec.	March	Fiscal 2019
Net sales	$ 566.1	$ 548.9	$ 541.0	$ 556.7	$ 2,212.7
Gross profit	94.3	87.9	91.7	91.6	365.5
Net earnings (b)	22.5	38.7	18.3	6.4	85.9
Net earnings attributable to Modine (b)	22.0	38.5	18.0	6.3	84.8
Net earnings per share attributable to Modine shareholders:					
Basic	$ 0.43	$ 0.76	$ 0.36	$ 0.12	$ 1.67
Diluted	0.43	0.75	0.35	0.12	1.65

(a) During fiscal 2020, restructuring expenses totaled $1.8 million, $2.3 million, $2.6 million, and $5.5 million for the quarters ended June 30, 2019, September 30, 2019, December 31, 2019, and March 31, 2020, respectively (see Note 5). During the third quarter of fiscal 2020, the Company sold a previously-closed manufacturing facility in Germany and, as a result, recorded a gain of $0.8 million (see Note 1). During the fourth quarter of fiscal 2020, the Company recorded asset impairment charges totaling $8.6 million related to long-lived assets and goodwill (see Note 5 and Note 14). During fiscal 2020, costs associated with the Company's review of strategic alternatives for the VTS segment's automotive business totaled $8.3 million, $11.9 million, $14.0 million, and $5.0 million for the quarters ended June 30, 2019, September 30, 2019, December 31, 2019, and March 31, 2020, respectively. During fiscal 2020, the Company adjusted its valuation allowances on deferred tax assets in the U.S and in Brazil. As a result, the Company recorded net income tax charges totaling $3.0 million and $4.1 million in the third and fourth quarters, respectively. Also during fiscal 2020, the Company recorded a net income tax charge totaling $2.9 million, $2.7 million of which was recorded in the third quarter, as a result of legal entity restructuring completed in preparation of a potential sale of the automotive business (see Note 7).

(b) During fiscal 2019, restructuring expenses totaled $0.2 million, $0.5 million, and $8.9 million for the quarters ended June 30, 2018, December 31, 2018, and March 31, 2019, respectively (see Note 5). During the second quarter of fiscal 2019, the Company sold its South African business within the BHVAC segment and, as a result, recorded a loss of $1.7 million (see Note 1). During the third quarter of fiscal 2019, the Company recorded a $0.4 million impairment charge related to a manufacturing facility in Austria (see Note 5). During the third and fourth quarter of fiscal 2019, the Company incurred $1.2 million and $5.9 million of costs associated with its review of strategic alternatives for the VTS segment's automotive business. The Company's income tax benefit for fiscal 2019 includes net benefits of $24.4 million and net charges of $2.2 million in the second and third quarters, respectively, related to the Tax Act and the recognition of foreign tax credits (see Note 7). During fiscal 2019, the Company adjusted its valuation allowances on deferred tax assets related to two separate subsidiaries in China and, as a result, recorded a $2.0 million income tax benefit and a $1.0 million income tax charge in the first and second quarters, respectively (see Note 7).

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Modine Manufacturing Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the consolidated financial statements, including the related notes, as listed in the index appearing under Item 15(a)(1), and the financial statement schedule listed in the index appearing under Item 15(a)(2), of Modine Manufacturing Company and its subsidiaries (the “Company”) (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of March 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of March 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended March 31, 2020 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of March 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in fiscal 2020 and the manner in which it accounts for intra-entity transfers of assets other than inventory in fiscal 2019.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Assessment – CIS Reporting Units

As described in Notes 1 and 14 to the consolidated financial statements, the Company's consolidated goodwill balance was $166.1 million as of March 31, 2020, and the goodwill associated with the CIS reporting units was $152.6 million. Management assesses goodwill for impairment annually as of March 31 of each year, or more frequently if events or circumstances change that would, more likely than not, reduce the fair value of a reporting unit below its carrying value. Management determines the fair value of a reporting unit based upon the present value of estimated future cash flows. Determining the fair value of a reporting unit involves judgment and the use of significant estimates and assumptions by management, which include assumptions regarding the revenue growth rates and operating profit margins used to calculate estimated future cash flows, the risk-adjusted discount rates, business trends and market conditions.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the CIS reporting units is a critical audit matter are there was significant judgment by management when determining the fair value of the reporting units. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating evidence relating to management's estimated future cash flows and significant assumptions, including revenue growth rates, operating profit margins, and the risk-adjusted discount rates. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the goodwill impairment assessment, including controls over the estimated fair value of the CIS reporting units. These procedures also included, among others, testing management's process for developing the fair value estimates; evaluating the appropriateness of the discounted cash flow model; testing the completeness, accuracy, and relevance of underlying data used in the model; and evaluating the significant assumptions used by management including revenue growth rates, operating profit margins, and risk-adjusted discount rates. Evaluating management's assumptions related to revenue growth rates and operating profit margins involved evaluating whether the assumptions used were reasonable considering (i) the current and past performance of the reporting units, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow model and certain significant assumptions, including the risk-adjusted discount rates.

/s/ PricewaterhouseCoopers LLP
Milwaukee, Wisconsin
May 29, 2020

We have served as the Company's auditor since 1935.

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

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES.

Conclusion Regarding Disclosure Controls and Procedures

As of the end of the period covered by this Annual Report on Form 10-K, management of the Company, at the direction of the General Counsel and under the supervision, and with the participation, of the Company's President and Chief Executive Officer and Vice President, Finance and Chief Financial Officer, evaluated the effectiveness of the Company's disclosure controls and procedures, at a reasonable assurance level, as defined in the Securities Exchange Act Rules 13a-15(e) and 15d-15(e). Based upon that evaluation, the President and Chief Executive Officer and Vice President, Finance and Chief Financial Officer have concluded that the Company's disclosure controls and procedures were effective, at a reasonable assurance level, as of March 31, 2020.

Management's Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. The Company's internal control over financial reporting is a process designed by, or under the supervision of, the Company's President and Chief Executive Officer and Vice President, Finance and Chief Financial Officer, and effected by the Company's board of directors, management and other personnel to provide reasonable assurance regarding the reliability of its financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management, with the participation of the Company's President and Chief Executive Officer and Vice President, Finance and Chief Financial Officer, assessed the effectiveness of the Company's internal control over financial reporting as of March 31, 2020. In making its assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in "*Internal Control—Integrated Framework (2013).*" Based upon this assessment, management concluded that, as of March 31, 2020, the Company's internal control over financial reporting was effective.

The effectiveness of the Company's internal control over financial reporting as of March 31, 2020 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control Over Financial Reporting

There have been no changes in internal control over financial reporting during the fourth quarter of fiscal 2020 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Directors. The Company incorporates by reference the information appearing in the Company's Proxy Statement for the 2020 Annual Meeting of Shareholders to be held on July 23, 2020 (the "2020 Annual Meeting Proxy Statement") under the caption "Election of Directors."

Executive Officers. The information in response to this Item appears under the caption "Information about our Executive Officers" in this Form 10-K.

Code of Conduct. The Company incorporates by reference the information appearing in the 2020 Annual Meeting Proxy Statement under the caption "Corporate Governance – Code of Conduct." The Company's Code of Conduct is included on its website, www.modine.com (About Modine link). We intend to satisfy our disclosure requirements under Item 5.05 of Form 8-K regarding amendments to, or waivers of, any provision of our Code of Conduct that applies to our principal executive, financial and accounting officers and our directors by posting such information on our website.

Board Committee Charters. The Board of Directors has approved charters for its Audit Committee, Officer Nomination and Compensation Committee, Corporate Governance and Nominating Committee and Technology Committee. These charters are included on the Company's website, www.modine.com (Investors link).

Audit Committee Financial Expert. The Company incorporates by reference the information appearing in the 2020 Annual Meeting Proxy Statement under the caption "Committees of the Board of Directors – Audit Committee."

Audit Committee Disclosure. The Company incorporates by reference the information appearing in the 2020 Annual Meeting Proxy Statement under the captions "Committees of the Board of Directors – Audit Committee" and "Board Meetings and Committees."

Guidelines on Corporate Governance. The Board of Directors has adopted Guidelines on Corporate Governance. The Company's Guidelines on Corporate Governance are included on its website, www.modine.com (Investors link).

Security Holder Recommendation of Board Nominees. The Company incorporates by reference the information appearing in the 2020 Annual Meeting Proxy Statement under the caption "Shareholder Nominations and Recommendations of Director Candidates."

Delinquent Section 16(a) Reports. The Company incorporates by reference the information appearing in the 2020 Annual Meeting Proxy Statement under the caption "Delinquent Section 16(a) Reports."

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.

ITEM 11. EXECUTIVE COMPENSATION.

The information appearing in the 2020 Annual Meeting Proxy Statement under the captions "Compensation Discussion and Analysis," "Compensation of Directors," "Committees of the Board of Directors – Officer Nomination and Compensation Committee: Compensation Committee Interlocks and Insider Participation," and "Compensation Committee Report" is incorporated herein by reference.

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

The Company incorporates by reference the information relating to stock ownership under the caption "Security Ownership of Certain Beneficial Owners and Management," and under the caption "Equity Compensation Plan Information," in the 2020 Annual Meeting Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

The Company incorporates by reference the information contained in the 2020 Annual Meeting Proxy Statement under the captions "Certain Relationships and Related Party Transactions" and "Director Independence."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The Company incorporates by reference the information contained in the 2020 Annual Meeting Proxy Statement under the caption "Independent Auditor's Fees for Fiscal 2020 and 2019."

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) *Documents Filed*. The following documents are filed as part of this Report:

	Page in Form 10-K
1. The consolidated financial statements of Modine Manufacturing Company and its subsidiaries filed under Item 8:	
Consolidated Statements of Operations for the years ended March 31, 2020, 2019 and 2018	42
Consolidated Statements of Comprehensive Income for the years ended March 31, 2020, 2019 and 2018	43
Consolidated Balance Sheets at March 31, 2020 and 2019	44
Consolidated Statements of Cash Flows for the years ended March 31, 2020, 2019 and 2018	45
Consolidated Statements of Shareholders' Equity for the years ended March 31, 2020, 2019 and 2018	46
Notes to Consolidated Financial Statements	47-75
Report of Independent Registered Public Accounting Firm	76-77
2. Financial Statement Schedules	
The following financial statement schedule should be read in conjunction with the consolidated financial statements set forth in Item 8:	
Schedule II -- Valuation and Qualifying Accounts for the years ended March 31, 2020, 2019 and 2018	81
Schedules other than those listed above are omitted because they are not applicable, not required, or because the required information is included in the consolidated financial statements and the notes thereto.	
3. Exhibits and Exhibit Index.	82-85
See the Exhibit Index included as the last part of this report, which is incorporated herein by reference. Each management contract and compensatory plan or arrangement required to be filed as an exhibit to this report is identified in the Exhibit Index by an asterisk following its exhibit number.	

ITEM 16. FORM 10-K SUMMARY.

None.

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS
For the years ended March 31, 2020, 2019 and 2018
(In millions)

		Additions		
Description	**Balance at Beginning of Period**	**Charged (Benefit) to Costs and Expenses**	**Charged to Other Accounts**	**Balance at End of Period**
2020: Valuation Allowance for Deferred Tax Assets	$ 43.4	$ 4.5	$ (1.0)[(a)]	$ 46.9
2019: Valuation Allowance for Deferred Tax Assets	$ 48.9	$ (1.6)	$ (3.9)[(a)]	$ 43.4
2018: Valuation Allowance for Deferred Tax Assets	$ 49.6	$ (6.7)	$ 6.0[(a)]	$ 48.9

(a) Foreign currency translation and other adjustments. The fiscal 2018 amounts also included increases associated with the Company's acquisition of Luvata HTS.

MODINE MANUFACTURING COMPANY
(THE "REGISTRANT")
(COMMISSION FILE NO. 1-1373)

EXHIBIT INDEX
TO
2020 ANNUAL REPORT ON FORM 10-K

Exhibit No.	Description	Incorporated Herein By Referenced To	Filed Herewith
3.1	Amended and Restated Articles of Incorporation, as amended.	Exhibit 3.1 to Form 10-K for the fiscal year ended March 31, 2018	
3.2	Bylaws, as amended.	Exhibit 3.1 to Registrant's Current Report on Form 8-K dated October 24, 2019	
4.1	Form of Stock Certificate of the Registrant.	Exhibit 4(a) to Form 10-K for the fiscal year ended March 31, 2003 ("2003 10-K")	
4.2	Amended and Restated Articles of Incorporation, as amended.	See Exhibit 3.1 hereto.	
4.3**	Note Purchase and Private Shelf Agreement (the "Original Note Purchase Agreement") dated as of August 12, 2010 among the Registrant and the Series A Purchasers named therein of $125,000,000 6.83% Secured Senior Notes, Series A, due August 12, 2020 and $25,000,000 Private Shelf Facility and each Prudential Affiliate (as defined therein) that may become bound by certain provisions thereof.	Exhibit 4.2 to Registrant's Current Report on Form 8-K dated August 12, 2010 ("August 12, 2010 8-K")	
4.4**	Amended and Restated Collateral Agency Intercreditor Agreement (the "Original Intercreditor Agreement") dated as of August 12, 2010 among the Lenders (as defined therein), the Noteholders (as defined therein) and JPMorgan Chase Bank, N.A. as Collateral Agent.	Exhibit 4.3 to August 12, 2010 8-K	
4.5**	First Amendment to Note Purchase and Private Shelf Agreement and Waiver dated as of March 15, 2012, with Prudential Investment Management, Inc., The Prudential Insurance Company of America and Prudential Retirement Insurance and Annuity Company (collectively the "Noteholders") pursuant to which the Company and the Noteholders amended the Original Note Purchase Agreement.	Exhibit 4.2 to Registrant's Current Report on Form 8-K dated March 15, 2012	
4.6**	Second Amendment to Note Purchase and Private Shelf Agreement dated as of April 20, 2012, with Prudential Investment Management, Inc., The Prudential Insurance Company of America and Prudential Retirement Insurance and Annuity Company (collectively the "Noteholders") pursuant to which the Company and the Noteholders amended the Original Note Purchase Agreement, as amended.	Exhibit 4.2 to Registrant's Current Report on Form 8-K dated April 20, 2012	
4.7**	Third Amendment to Note Purchase and Private Shelf Agreement dated as of August 6, 2012, with Prudential Investment Management, Inc., The Prudential Insurance Company of America and Prudential Retirement Insurance and Annuity Company (collectively the "Noteholders") pursuant to which the Company and the Noteholders amended the Original Note Purchase Agreement, as amended.	Exhibit 4.2 to Registrant's Current Report on Form 8-K dated August 6, 2012	

4.8**	Second Amended and Restated Credit Agreement dated as of August 30, 2013, with JPMorgan Chase Bank, N.A., as Administrative Agent, LC Issuer, Swing Line Lender and as a Lender, and U.S. Bank, N.A. and Wells Fargo Bank, N.A. as Syndication Agents and as Lenders, BMO Harris Bank N.A., as Documentation Agent and as Lender and Associated Bank, N.A., Comerica Bank and Sovereign Bank as Lenders	Exhibit 4.1 to Registrant's Current Report on Form 8-K dated August 30, 2013 ("August 30, 2013 8-K")	
4.9**	Fourth Amendment to Note Purchase and Private Shelf Agreement (the "Fourth Note Purchase Amendment") dated as of August 30, 2013, with Prudential Investment Management, Inc., The Prudential Insurance Company of America and Prudential Retirement Insurance and Annuity Company (collectively the "Note Holders") pursuant to which the Company and the Note Holders amended the Original Note Purchase Agreement, as amended.	Exhibit 4.2 to August 30, 2013 8-K	
4.10**	First Amendment to the Original Intercreditor Agreement, among the Lenders, the Note Holders and JPMorgan as Collateral Agent, pursuant to which the Lenders, the Note Holders and JPMorgan amended the Original Intercreditor Agreement.	Exhibit 4.3 to August 30, 2013 8-K	
4.11	Credit Facility Agreement among Modine Holding GmbH, Modine Europe GmbH and Deutsche Bank AG dated as of April 27, 2012.	Exhibit 4.10 to Registrant's Form 10-K for the fiscal year ended March 31, 2012	
4.12	Third Amended and Restated Credit Agreement dated as of November 15, 2016.	Exhibit 4.1 to Registrant's Current Report on Form 8-K dated November 15, 2016 ("November 15, 2016 8-K")	
4.13	Amended and Restated Note Purchase and Private Shelf Agreement dated as of November 15, 2016.	Exhibit 4.2 to November 15, 2016 8-K	
4.14	Description of Registrant's securities		X
4.15	Fourth Amended and Restated Credit Agreement dated as of June 28, 2019.	Exhibit 4.1 to Registrant's Current Report on Form 8-K dated June 28, 2019	
4.16	Second Amended and Restated Note Purchase and Private Shelf Agreement dated as of August 6, 2019	Exhibit 4.1 to Registrant's Form 10-Q for the third quarter ended December 31, 2019	
4.17	First Amendment to Second Amended and Restated Note Purchase and Private Shelf Agreement dated as of January 31, 2020	Exhibit 4.2 to Registrant's Form 10-Q for the third quarter ended December 31, 2019	
4.18	Amendment No. 1 to Fourth Amended and Restated Credit Agreement dated as of May 19, 2020	Exhibit 4.1 to Registrant's Current Report on Form 8-K dated May 19, 2020 ("May 19, 2020 8-K")	
4.19	Second Amendment to Second Amended and Restated Note Purchase and Private Shelf Agreement dated as of May 19, 2020	Exhibit 4.2 to May 19, 2020 8-K	
10.1*	Director Emeritus Retirement Plan effective April 1, 1992 (and frozen as of July 1, 2000).	Exhibit 10(a) to Registrant's Form 10-K for the fiscal year ended March 31, 2002	
10.2*	Employment Agreement between the Registrant and Thomas A. Burke dated as of June 15, 2007.	Exhibit 10.3 to Registrant's Current Report on Form 8-K dated June 15, 2007	

10.3*	Form of Amendment No. 1 to Employment Agreement entered into as of July 1, 2008 with Thomas A. Burke.	Exhibit 10.1 to Registrant's Current Report on Form 8-K dated July 1, 2008
10.4*	Form of Change in Control and Termination Agreement (amended and restated) between the Registrant and officers other than Thomas A. Burke.	Exhibit 10(f) to Registrant's Form 10-K for the year ended March 31, 2004
10.6*	Executive Supplemental Retirement Plan (as amended).	Exhibit 10(f) to Registrant's Form 10-K for the fiscal year ended March 31, 2000
10.7*	Deferred Compensation Plan (as amended).	Exhibit 10(y) to 2003 10-K
10.8*	2008 Incentive Compensation Plan (Amended and Restated effective May 7, 2014).	Exhibit 10.1 to Registrant's Current Report on Form 8-K dated July 17, 2014
10.9*	Form of Fiscal 2020 Performance Stock Award Agreement.	Exhibit 10.1 to Registrant's Form 10-Q for the quarter ended June 30, 2019
10.10*	Form of Fiscal 2020 Incentive Stock Option Award Agreement.	Exhibit 10.2 to Registrant's Form 10-Q for the quarter ended June 30, 2019
10.11*	Form of Fiscal 2020 Restricted Stock Unit Award Agreement.	Exhibit 10.3 to Registrant's Form 10-Q for the quarter ended June 30, 2019
10.12*	Form of Fiscal 2020 Non-Qualified Stock Option Award Agreement.	Exhibit 10.4 to Registrant's Form 10-Q for the quarter ended June 30, 2019
10.13*	Amendment No. 1 to Form of Change in Control and Termination Agreement (amended and restated) between the Registrant and Officers other than Thomas A. Burke.	Exhibit 10.17 to Registrant's Form 10-K for the fiscal year ended March 31, 2011
10.14*	Supplemental Severance Policy.	Exhibit 10.1 to Registrant's Current Report on Form 8-K dated October 17, 2011
10.15*	2017 Incentive Compensation Plan.	Exhibit 10.1 to Registrant's Current Report on Form 8-K dated July 20, 2017
10.16*	Form of Fiscal 2020 Non-Employee Director Restricted Stock Unit Award.	Exhibit 10.1 to Registrant's Form 10-Q for the quarter ended September 30, 2019
10.17*	Separation Letter for Dennis P. Appel dated as of September 26, 2019.	Exhibit 10.1 to the Registrant's Form 10-Q for the quarter ended December 31, 2019
10.18*	Release Agreement executed as of October 17, 2019, between Modine Manufacturing Company and Dennis P. Appel.	Exhibit 10.2 to the Registrant's Form 10-Q for the quarter ended December 31, 2019
10.19*	Employment Retention Agreement for Scott Wollenberg, dated as of July 26, 2019.	Exhibit 10.5 to the Registrant's Form 10-Q for the quarter ended June 30, 2019

21	List of subsidiaries of the Registrant.	X
23	Consent of independent registered public accounting firm.	X
31.1	Rule 13a-14(a)/15d-14(a) Certification of Thomas A. Burke, President and Chief Executive Officer.	X
31.2	Rule 13a-14(a)/15d-14(a) Certification of Michael B. Lucareli, Vice President, Finance and Chief Financial Officer.	X
32.1	Section 1350 Certification of Thomas A. Burke, President and Chief Executive Officer.	X
32.2	Section 1350 Certification of Michael B. Lucareli, Vice President, Finance and Chief Financial Officer.	X
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)	X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.	X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.	X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.	X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.	X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.	X
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).	X

* Denotes management contract or executive compensation plan or arrangement required to be filed as an exhibit pursuant to Item 15 of Form 10-K.

** Pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K, the Registrant has omitted certain agreements with respect to long-term debt not exceeding 10% of consolidated total assets. The Registrant agrees to furnish a copy of any such agreements to the Securities and Exchange Commission upon request.

SIGNATURES

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

Date: May 29, 2020

Modine Manufacturing Company

By: /s/ Thomas A. Burke
Thomas A. Burke, President
and Chief Executive Officer
(Principal Executive Officer)

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

/s/ Thomas A. Burke Thomas A. Burke President, Chief Executive Officer and Director (Principal Executive Officer)	May 29, 2020
/s/ Michael B. Lucareli Michael B. Lucareli Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	May 29, 2020
/s/ Marsha C. Williams Marsha C. Williams Director	May 29, 2020
/s/ David J. Anderson David J. Anderson Director	May 29, 2020
/s/ Eric D. Ashleman Eric D. Ashleman Director	May 29, 2020
/s/ David G. Bills David G. Bills Director	May 29, 2020
/s/ Charles P. Cooley Charles P. Cooley Director	May 29, 2020
/s/ Suresh V. Garimella Suresh V. Garimella Director	May 29, 2020
/s/ Larry O. Moore Larry O. Moore Director	May 29, 2020
/s/ Christopher W. Patterson Christopher W. Patterson Director	May 29, 2020
/s/ Christine Y. Yan Christine Y. Yan Director	May 29, 2020