

**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 **September 30, 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 001-37884

VALVOLINE INC.



Kentucky
(State or other jurisdiction of incorporation or organization)

30-0939371
(I.R.S. Employer Identification No.)

100 Valvoline Way,
Lexington, Kentucky 40509
Telephone Number (859) 357-7777

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

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Common stock, par value \$0.01 per share	VVV	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 for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

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

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

Large Accelerated Filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-Accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
		Emerging Growth Company	<input type="checkbox"/>

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

Indicate by check mark whether the registrant 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

The aggregate market value of voting common stock held by non-affiliates at March 31, 2020 was approximately \$2.4 billion. At November 17, 2020, there were 185,265,028 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement ("Proxy Statement") for its 2021 Annual Meeting of Shareholders, which will be filed within 120 days of the Registrant's fiscal year end, are incorporated by reference into Part III of this Annual Report on Form 10-K.

TABLE OF CONTENTS

		<u>Page</u>
PART I		
Item 1.	Business	4
Item 1A.	Risk Factors	16
Item 1B.	Unresolved Staff Comments	27
Item 2.	Properties	27
Item 3.	Legal Proceedings	27
Item 4.	Mine Safety Disclosures	27
PART II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	28
Item 6.	Selected Financial Data	29
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operation	33
Item 7A.	Quantitative and Qualitative Disclosures about Market Risk	57
Item 8.	Financial Statements and Supplementary Data	59
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	112
Item 9A.	Controls and Procedures	112
Item 9B.	Other Information	114
PART III		
Item 10.	Directors, Executive Officers and Corporate Governance	115
Item 11.	Executive Compensation	115
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	115
Item 13.	Certain Relationships and Related Transactions and Director Independence	115
Item 14.	Principal Accountant Fees and Services	115
PART IV		
Item 15.	Exhibits and Financial Statement Schedule	116

Forward-Looking Statements

Certain statements in this Annual Report on Form 10-K, other than statements of historical fact, including estimates, projections, statements related to the Company's business plans and operating results are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Valvoline has identified some of these forward-looking statements with words such as "anticipates," "believes," "expects," "estimates," "is likely," "predicts," "projects," "forecasts," "may," "will," "should" and "intends" and the negative of these words or other comparable terminology. These forward-looking statements are based on Valvoline's current expectations, estimates, projections and assumptions as of the date such statements are made and are subject to risks and uncertainties that may cause results to differ materially from those expressed or implied in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed under the headings "Risk Factors" in Item 1A of Part I of this Annual Report on Form 10-K, "Management's Discussion and Analysis of Financial Condition and Results of Operation" in Item 7 of Part II of this Annual Report on Form 10-K and "Quantitative and Qualitative Disclosures about Market Risk" in Item 7A of Part II of this Annual Report on Form 10-K. Valvoline assumes no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future, unless required by law.

PART I

ITEM 1. BUSINESS

Overview

Valvoline Inc., a Kentucky corporation, is a worldwide marketer and supplier of engine and automotive maintenance products and services. The terms “Valvoline,” the “Company,” “we,” “us,” “management” and “our” as used herein refer to Valvoline Inc., its predecessors and its consolidated subsidiaries, except where the context indicates otherwise. On September 28, 2016, Valvoline completed its initial public offering (“IPO”) of common stock and trades on the New York Stock Exchange (“NYSE”) under the symbol “VVV.”

Valvoline™ is one of the most recognized and respected premium consumer brands in the global automotive lubricant and preventative maintenance industry, known for its innovative, high quality products and superior levels of service. Established in 1866, Valvoline’s heritage spans over 150 years, during which it was the petroleum industry’s first trademarked motor oil brand in the United States (“U.S.”) and has developed powerful name recognition across multiple product and service channels. In addition to the iconic Valvoline-branded passenger car motor oils and other automotive lubricant products, Valvoline provides a wide array of lubricants used in heavy duty equipment, as well as automotive chemicals and fluids designed to improve engine performance and lifespan. Valvoline also operates a fast-growing, best-in-class network of retail service center stores, which are well positioned to serve evolving vehicle maintenance needs.

In the United States and Canada, Valvoline’s products and services are sold to retailers with over 55,000 retail outlets, to installer customers with approximately 15,000 locations, and through 1,462 company-owned and franchised stores. Valvoline also has a strong international presence, with products sold in more than 140 countries, and 20 preventive maintenance service centers stores operated through a joint venture in China.

Company background

Valvoline was incorporated in May 2016 as a subsidiary of Ashland Global Holdings Inc. (which together with its predecessors and consolidated subsidiaries is referred to herein as “Ashland”). Prior to this time, Valvoline operated as an unincorporated commercial unit of Ashland. Following a series of restructuring steps prior to the IPO, the Valvoline business was transferred from Ashland to Valvoline, including substantially all of the historical Valvoline business reported by Ashland, as well as certain other legacy Ashland assets and liabilities transferred to Valvoline from Ashland (the “Contribution”). On May 12, 2017, Ashland distributed all of its remaining interest in Valvoline to Ashland stockholders (the “Distribution”) through a pro rata dividend on shares of Ashland common stock outstanding, which marked the completion of Valvoline’s separation from Ashland.

Valvoline’s products and services

Valvoline’s product portfolio is designed to deliver quality solutions to meet the demands of its diverse customer base with varying needs. Valvoline has a history of leading innovation as the original motor oil brand, with ground-breaking products such as its all climate motor oil, the world’s first high mileage motor oil, and the first synthetic blend in the U.S. In addition to the iconic Valvoline-branded premium and conventional passenger car motor oils and other co-branded and private label automotive lubricant products, Valvoline provides a wide array of lubricants used in heavy duty equipment, as well as automotive coolants and chemicals designed to improve engine performance and lifespan. Valvoline products are used in a broad range of vehicles and engines, including light-duty (passenger cars, light trucks and two wheelers), heavy duty (heavy trucks, agricultural, mining and construction equipment), and electric vehicles.

Valvoline's service offerings are designed to provide superior customer service utilizing Valvoline's product portfolio to deliver quick, easy and trusted preventative maintenance to its consumers. Valvoline offers the following services at its service center stores:

- Oil changes
- Wiper blade replacement
- Serpentine belt service
- Radiator and cooling system service
- Filter (oil, air, cabin) replacement
- Fuel and air services (gas and diesel)
- Brake fluid service
- Differential and transfer case (gearbox) fluid service
- Power steering service
- Transmission system service
- Tire rotation
- Engine cleaning service
- Battery service
- Air conditioning service

Valvoline's product and service offerings align with the following categories:

	Categories	% of 2020 Sales	Description
Lubricants	Passenger car / Light duty	86%	Comprehensive assortment meeting the needs of passenger car (including electric vehicles), motorcycle and other light duty vehicles, including motor oil, transmission fluid, greases, and gear oil
	Heavy duty		Lubricating solutions for a wide range of heavy duty engine types (diesel, natural gas and gasoline) and applications ranging from on-road (Class 4 – Class 8 vehicles) to off-road construction, mining, agricultural, and power generation equipment
Antifreeze	Antifreeze / Coolants	5%	Antifreeze/coolants for original equipment manufacturers (“OEMs”); full assortment of additive technologies and chemistries to meet virtually all light-duty and heavy duty engine applications and heat transfer requirements of batteries and fuel cells used to power electric vehicles
Chemicals	Maintenance chemicals	3%	Functional and maintenance chemicals ranging from brake fluids and power steering fluids to chemicals specifically designed to clean and maintain optimal performance of fuel, cooling, and drive train systems
	Coatings		Specialty coatings designed to target rust prevention and sound absorption for automotive and industrial applications
Filters	Filters	4%	Oil and air filters meeting the needs of light-duty vehicles
Other	Other complementary products and royalties	2%	Windshield wiper blades, light bulbs, serpentine belts, drain plugs, other complementary products and franchisee royalties

COVID-19 impact

The outbreak of the coronavirus (“COVID-19”) was concentrated in China in late January 2020 and spread quickly, resulting in the World Health Organization declaring a global pandemic on March 11, 2020. COVID-19 created significant volatility in the global economy and led to numerous restrictions and reduced economic activity. Extraordinary actions have been taken by international, federal, state, and local public health and governmental authorities to contain and combat the spread of COVID-19 in regions throughout the world, including restricting non-essential travel, quarantines, “stay-at-home” orders, and similar mandates for many individuals to substantially restrict daily activities and for many businesses to modify or cease normal operations to minimize personal interaction and contact. While certain regions began to relax restrictions in the spring, resurgences in cases

continue to be monitored and often lead to reinstated and enhanced limitations. The duration and extent of restrictions that will remain in place currently remains unclear.

Despite the disruption from the pandemic, Valvoline's wholly-owned lubricant blending and packaging plants and company-owned Quick Lubes retail service center stores have generally remained open and operational to-date. The substantial majority of Valvoline's franchised service center stores have also remained open during the pandemic to-date, while a few stores temporarily shut down during the fiscal year. The COVID-19 pandemic created significant economic disruption during the year and is estimated to have had an immaterial adverse impact on Valvoline's fiscal 2020 financial results. The extent of future impacts from COVID-19 cannot be reasonably estimated at this time due to numerous uncertainties, including the duration and severity of the pandemic. Refer to Item 1A in Part I of this Annual Report on Form 10-K for a discussion of these factors and other risks which may be exacerbated by the pandemic. Also refer to Item 7 in Part II of this Annual Report on Form 10-K for further discussion regarding the impact of COVID-19 on Valvoline's business.

Industry overview

Valvoline participates primarily in the global finished lubricants market. In total, global annual lubricants demand is estimated to be approximately 12 billion gallons. Though declines were seen in fiscal 2020, Valvoline believes these were mostly temporary and related to restrictions from the COVID-19 pandemic. Demand for passenger car motor oil and motorcycle oil is estimated to account for approximately 20% of global lubricant demand. Heavy-duty oil and other transport lubricants account for another 40%, while the remaining 40% of global lubricant demand is comprised of non-transport lubricants such as hydraulic oil, gear oil, process oil and greases. The United States has historically accounted for the largest portion of lubricant demand, but has recently been surpassed by China, with India third. The lubricants market is impacted by the following key drivers and trends:

- Global transportation lubricants market demand is shifting towards higher performance finished lubricants, largely driven by advancements in vehicle/equipment design as well as more rigorous OEM and regulatory requirements for improved efficiency, optimized fuel consumption along with reduced carbon footprints and toxic emissions.
- Despite a recent decline in demand, which Valvoline believes was primarily the result of COVID-19 restrictions reducing miles driven, recent multiyear trends indicate that the North American transport lubricants market has experienced relatively flat to slightly declining average annual volumes due in part to an increase in oil change intervals, which has resulted in the shift towards higher performance lubricants, offset by an increase in the number of automobiles on the road and miles driven.
- Continued growth in the number of vehicles on the road has led to expansion of passenger vehicle lubricant sales in developing regions.

Reportable segments

Valvoline's reporting structure is composed of three reportable segments: Quick Lubes, Core North America, and International. Additionally, to reconcile to consolidated results, certain corporate and other non-operational matters are included in Unallocated and other. Refer to the below for a description of each reportable segment:

Quick Lubes

The Quick Lubes segment services the passenger car and light truck quick lube market through company-owned, independent franchises and joint venture retail quick lube service center stores, as well as independent Express Care stores that service vehicles with Valvoline products. Valvoline operates the second largest quick lube service chain by number of stores in the United States with Valvoline Instant Oil ChangeSM and the third largest quick lube service chain in Canada with the Valvoline Great Canadian Oil Change brand. Valvoline's quick lube service center stores offer customers a quick, easy and trusted way to maintain their vehicles, utilizing well-trained technicians who have access to a proprietary service process that sets forth rigorous protocols for both the steps that must be followed in the service of vehicles and for interactions with customers. The Express CareTM platform supports smaller North American operators that do not fit Valvoline's current franchise model and generally offer other services in addition to quick lubes, such as automotive repairs and car washes. Joint venture service center stores operate in eastern China throughout the Shandong and Shaanxi provinces. As of September 30, 2020, the Quick Lubes system consisted of 584 company-owned and 878 franchised locations and operated in 47 states in the U.S.

and five provinces in Canada. As of September 30, 2020, there were 296 Express Care™ locations in the U.S. and Canada and 20 joint venture service center locations within two provinces in China.

Core North America

The Core North America segment sells Valvoline™ and other branded and private label engine and automotive maintenance products in the United States and Canada to retailers for consumers to perform their own automotive and engine maintenance, as well as to installers that service vehicles and equipment for consumers. Sales of Valvoline products for consumers to perform their own automotive and engine maintenance are referred to as “Do-It-Yourself” or “DIY” consumers, and sales of Valvoline products for consumers to have their vehicles and equipment serviced are referred to as “Do-It-For-Me” or “DIFM” consumers. Sales for DIY consumers are primarily branded products sold through the retail channel to customers such as retail automotive parts stores, as well as to leading mass merchandisers and independent automotive part stores, in addition to convenience stores, dollar stores, farm stores, groceries and online retailers. Sales through the retail channel also include non-branded packaged goods to warehouse distributors that resell to both DIY consumers and to installers for DIFM consumers. Sales for DIFM consumers are generally sold through the installer channel to customers such as car dealers, general repair shops and third-party quick lube locations directly as well as through a network of distributors. Valvoline also sells products to heavy duty fleet customers, such as on-highway fleets and construction companies through the installer distributor network. Valvoline also has a strategic relationship with Cummins Inc. (“Cummins”), a leading supplier of heavy duty engines, for co-branding products for heavy duty consumers. Other sales within Core North America include OEM and specialty customers.

International

Valvoline’s International segment sells Valvoline™ and other branded engine and automotive products through wholly-owned affiliates, joint ventures, licensees and independent distributors in more than 140 countries outside of the United States and Canada for the maintenance of consumer and commercial vehicles and equipment. Key international regions include Europe, Middle East, and Africa (“EMEA”); Latin America (which includes Mexico, Central and South America); and Asia Pacific (Australia and Asia, including India and China). Valvoline has a growing presence in emerging and growth markets, such as China, India and Latin America. International sales include products for both light duty and heavy duty. Light duty products are sold internationally primarily through distributors to installer customers. Heavy duty products are sold either directly to key customers or through distributors. Valvoline has 50/50 joint ventures with Cummins in India, China and Argentina and joint ventures with other partners in Latin America.

Unallocated and other

Certain corporate and non-operational matters, such as net pension and other postretirement plan expense, company-wide restructuring activities and adjustments related to legacy businesses that are no longer attributed to Valvoline are generally included within Unallocated and other.

Business and growth strategies

Valvoline’s products are foundational to its success in accelerating the shift to services and building the world’s leading engine and automotive maintenance business through innovative technology, brand strength and effective marketing, and by leveraging customer relationships and experiences to develop and expand on global capabilities. Valvoline draws on the talents of its team and delivers solid margins, high free cash flow, and significant growth opportunities through its multi-channel model. Valvoline’s key business and growth strategies include:

- Aggressively growing Quick Lubes through organic service center expansion and opportunistic acquisitions, while rapidly diversifying and expanding retail service offerings and capabilities through a quick, easy and trusted customer experience delivered by hands-on experts;
- Strengthening and maintaining the foundation in Core North America by leveraging investments in technology and marketing to drive speed, efficiency and value across the business and customer interactions, while increasing penetration of Valvoline’s full product portfolio;
- Accelerating International market share growth through continued development of and investment in key emerging and high value markets;

- Expanding capabilities to serve future transport vehicles by continuing to develop relationships with electric vehicle OEMs and leveraging innovation in the delivery of future services and products in direct and adjacent markets; and
- Building a strong foundation enabled by data and technology to make Valvoline easy to do business with.

Quick Lubes store development

Valvoline's objective is to build the world's leading engine and automotive maintenance business by providing each customer with superior service through its hands-on-expertise and the highest quality lubricants and complementary products. The SuperPro™ system for executing Valvoline's retail services is built upon providing consistent quick, easy, and trusted preventative maintenance to build a high degree of customer loyalty. Valvoline's strategy for its retail services is to grow through opportunistic acquisitions and new store development with company-owned stores and franchisee expansion in key underdeveloped market opportunity areas. The summary below highlights the unit growth within the Quick Lubes system over the last five years, in addition to its annual same-store sales growth in each of those years:

	Company-owned^(a)				
	For the years ended September 30				
	2020	2019	2018	2017	2016
Beginning of period	519	462	384	342	279
Opened	36	28	17	3	3
Acquired	12	24	3	29	52
Conversions between company-owned and franchised	17	5	58	14	9
Closed	—	—	—	(4)	(1)
End of period	584	519	462	384	342
<i>Same-store sales growth</i>	<i>2.6 %</i>	<i>9.7 %</i>	<i>8.7 %</i>	<i>7.0 %</i>	<i>6.2 %</i>
	Franchised^{(a) (b)}				
	For the years ended September 30				
	2020	2019	2018	2017	2016
Beginning of period	866	780	743	726	663
Opened	36	65	28	38	33
Acquired	—	31	73	—	42
Conversions between company-owned and franchised	(17)	(5)	(58)	(14)	(9)
Closed	(7)	(5)	(6)	(7)	(3)
End of period ^(c)	878	866	780	743	726
<i>Same-store sales growth</i>	<i>2.1 %</i>	<i>10.4 %</i>	<i>8.0 %</i>	<i>7.5 %</i>	<i>8.0 %</i>
Total stores	1,462	1,385	1,242	1,127	1,068
<i>Same-store sales growth</i>	<i>2.3 %</i>	<i>10.1 %</i>	<i>8.3 %</i>	<i>7.4 %</i>	<i>7.5 %</i>

(a) Refer to "Key Business Measures" in Item 7 of Part II of this Annual Report on Form 10-K for a description of management's use and determination of key metrics, including store counts and same-store sales.

(b) Valvoline's franchisees are distinct legal entities and Valvoline does not consolidate the results of operations of its franchisees.

(c) Included in the store count at September 30, 2020 was one franchised service center store temporarily closed at the discretion of the independent operator due to impacts of COVID-19.

The Quick Lubes network of stores delivered its 14th consecutive year of annual same-store sales growth in fiscal 2020, a key indicator of the system's operational performance and in-store execution. As of September 30, 2020, Valvoline operated, either directly or through its franchisees, 1,462 quick lube service center stores, a net increase

of 77 over the prior year. Newly constructed and acquired locations increased company-owned stores by 36 and 12, respectively, and the franchise network expanded in key markets to add 29 net new stores, which combined for the net 77 increase in Quick Lubes system stores in fiscal 2020.

Valvoline added 520 net new stores to the Quick Lubes system since the beginning of fiscal 2016, growing the system by more than 50% since that time. These additions included the acquisition of 120 company-owned service centers through single and multi-store transactions; opening 82 and 172 net new company-owned and franchised stores, respectively; and becoming the franchisor of 146 service centers that became part of the franchise network and included Valvoline's first international quick lube acquisition that began the expansion into Canada.

As of September 30, 2020, the Quick Lubes system consisted of 584 company-owned and 878 franchised locations that operate in 47 states in the U.S. and five provinces in Canada. Express Care™ locations operated in 296 stores in the U.S. and Canada, and Valvoline's joint venture in China to pilot expansion of retail quick lube service center stores outside of North America operated 20 locations in two provinces in China.

Competition

The industry is highly competitive and Valvoline faces competition in all product and service categories and subcategories. Competition is based on several key criteria, including brand recognition, product performance, quality, price, availability, and positioning, security of supply, customer service, as well as the ability to bring innovative products or services to the marketplace.

The Quick Lubes segment competes with other major franchised brands that offer a turn-key operations management system, such as Jiffy Lube (owned by Shell), Grease Monkey, Take 5 Oil Change, Express Oil Change and Mr. Lube in Canada, as well as national branded companies that offer a professional signage program with limited business model support, similar to Valvoline's Express Care network, as well as regional players that are not directly affiliated with a major brand. Valvoline also competes with automotive dealerships and service centers, which provide quick lube and other preventative maintenance services. Valvoline believes there are approximately 9,000 existing quick lube stores currently operating in the U.S. market. Jiffy Lube is currently the Company's largest competitor by number of stores with approximately 1,900 stores owned or operated by franchisees in the U.S. The Canadian quick lubes market is similarly fragmented with a small number of large players that comprise roughly half of the market, while the remainder is made up of smaller local and regional competitors, automotive dealerships and service stations.

In the Core North America segment, Valvoline's principal competitors for retail customers are global integrated oil brands, such as Shell, which produces Pennzoil and Quaker State; BP, which produces Castrol; Exxon Mobil, which produces Mobil 1; as well as mid-tier brands and private label producers. Valvoline currently ranks as the number three passenger car motor oil brand in the DIY market by volume. With respect to installer customers in the United States and Canada, Valvoline competes with these same major integrated oil brands, many of which have significantly greater financial resources and more diverse portfolios of products and services, leading to greater operating and financial flexibility.

Major competitors of Valvoline's International segment vary by region. Valvoline generally faces strong competition from global integrated oil brands, as these companies have a particularly strong presence in Europe and Asia. In certain markets, Valvoline also competes with regional brands, including brands produced by national oil companies, such as Sinopec in China and Indian Oil in India.

Marketing and sales

Valvoline places a high priority on sales and marketing and focuses marketing efforts on areas expected to yield the highest rate of return. Valvoline has a centralized marketing services group as well as dedicated marketing resources in each reportable segment, which are well qualified to reach target customers. The majority of Valvoline's large customers are supported by direct sales representatives with a number of key customers having dedicated Valvoline teams. In addition, Valvoline has a number of distributors within the Core North America and International reportable segments that represent the Company's products. In Core North America, Valvoline products are sold to consumers through over 55,000 retail outlets, to installer customers with approximately 15,000 locations, and in Quick Lubes, through 1,462 company-owned and franchised stores, 296 Express Care™ locations, and 20 joint venture locations. Valvoline serves its customer base through its sales force and technical support organization, leveraging the Company's technology portfolio and customer relationships globally, while meeting

customer demands locally. Valvoline also utilizes its digital infrastructure and technology to more efficiently interact with customers, driving customer engagement to deliver growth, customer retention and acquisition.

Valvoline uses a variety of marketing techniques to build awareness of, and create demand for, Valvoline products and services. Valvoline advertises through social and digital media, as well as traditional media outlets such as radio. Valvoline selectively sponsors teams in high performance racing, including a current National Association for Stock Car Auto Racing ("NASCAR") sponsorship of Hendrick Motorsports, featuring the 2020 NASCAR Cup Series champion, Chase Elliott, and drivers, Jimmie Johnson, William Byron and Alex Bowman. In addition, Valvoline sponsors other teams and players, including 2020 Europa League champion, Sevilla Fútbol Club, which plays in La Liga.

Research and development

Valvoline research and development focuses on new, unique, and innovative products and services to meet current and future customer needs. These products and services are discovered using Valvoline's unique "Hands on Expertise" innovation approach, which promotes a deep insight of customer requirements, allowing a high innovation success rate. Novel ideas are vetted using mathematical modeling from first principles when applicable, and the technology team works with the business through commercialization to ensure a positive customer experience. Regional technology centers in the Americas, EMEA, and Asia Pacific regions also locally develop appropriate solutions for vehicle and equipment maintenance and manufacturing in their markets. In addition to its own research and development initiatives, Valvoline also conducts testing for other entities, which partially offsets its research and development costs by increasing asset utilization. Valvoline will continue funding research and development to continue deploying innovative, high-quality products and services, which enhances Valvoline's competitive position.

Intellectual property

Valvoline is continually seeking to develop new technology and enhance its existing technology. Valvoline has been issued approximately 50 U.S. and 75 international patents and has nearly 25 U.S. and 85 international patent applications pending or published. Valvoline also holds over 2,500 trademarks in various countries around the world, which Valvoline believes are some of its most valuable assets. These trademarks include the Valvoline trademark and the famous "V" brand logo trademark, which are registered in over 140 countries. In addition, Valvoline uses various trade names and service marks in its business, including ValvolineTM and Valvoline Instant Oil ChangeSM, among others and including those for key products. Valvoline also has a variety of intellectual property licensing agreements. Valvoline owns over 900 domain names that are used to promote Valvoline products and services and provide information about the Company.

Raw material supply and prices

The key raw materials used in Valvoline's business are base oils, additives, packaging materials (high density polyethylene bottles, corrugated packaging and steel drums) and ethylene glycol. Valvoline continuously monitors global supply and cost trends of these key raw materials and obtains these raw materials from a diversified network of large global suppliers and regional providers. Valvoline's sourcing strategy is to ensure supply through contracting with a diversified supply base while leveraging market conditions to take advantage of spot opportunities whenever such conditions are available. Valvoline leverages worldwide spend to pursue favorable contract terms from global suppliers and utilizes regional providers to ensure market competitiveness and reliability in its supply chain. Valvoline also utilizes the Company's research and development resources to develop alternative product formulations, which provide flexibility in the event of supply interruptions. Valvoline closely monitors the Company's supply chain and conducts annual supply risk assessments of its critical suppliers to reduce risk.

Valvoline has a large manufacturing and distribution footprint in the United States, with seven lubricant blending and packaging plants and several packaging and warehouse locations. Additional blending and packaging plants are located in Australia, Canada, the Netherlands, and Serbia. Valvoline recently completed the construction phase of its first blending and packaging plant in China. The plant will have an annual capacity in excess of 30 million gallons of lubricants and coolants, with the initial testing phase beginning in the first quarter of 2021. The plant is currently on schedule for production to begin by the end of the calendar year 2020 and will be producing substantially all of the Company's lubricant volume for the China market by the end of fiscal 2021. Valvoline also uses numerous third-party toll manufacturers and warehouses both in the U.S. and internationally and is part of joint ventures that operate blending and packaging facilities in Ecuador and India.

Valvoline seeks to actively manage fluctuations in supply costs, product selling prices and the timing thereof to preserve margins. The prices of many of Valvoline's products fluctuate based on the price of base oil, which represents a large percentage of Valvoline's cost of sales. Given that base oil, a derivative of crude, is highly correlated to the global oil market, there can be volatility in base oil prices. The amount of volatility is related to the world crude price as well as to the global supply and demand balance of base oil. Base oil prices generally follow crude prices, but the lag period between changes in the price of crude oil and changes in the price of base oil is influenced by whether there is an excess of or shortness in the supply of base oil.

Valvoline works diligently to adjust product selling prices to react to changes in base oil costs and to protect margins. As part of the strategy to mitigate the impact of base oil volatility, Valvoline has negotiated base oil supply contracts with terms that have reduced the impact of changes in the base oil market on Valvoline's financial results. Valvoline contracts in several of the Company's sales channels establish the timing of adjustments to selling prices in response to changes in raw material prices. Pricing adjustments to products sold to Valvoline's larger national or regional installer customer accounts are generally made pursuant to their contracts and are often based on movements in published base oil indices. Pricing for product sold to Valvoline's franchisees is adjusted on a periodic basis pursuant to an agreed upon index (weighted combination of published base oil indices), the composition and weighting of which may be updated from time to time by Valvoline and representatives of Valvoline's franchisees. Pricing adjustments for product sold to retail customers, private label products in the United States and product sold to smaller installer customer accounts are generally market driven, based on negotiations in light of base oil costs and the pricing strategies of Valvoline's competitors.

Backlog

Although Valvoline may experience availability constraints from time to time for certain products, orders are generally filled within 30 days of receiving them. Therefore, Valvoline usually has a product backlog of less than 30 days at any one time, which the Company does not consider material to its business.

Seasonality

Overall, there is little seasonality in Valvoline's business. Valvoline's Quick Lubes business, and to a lesser extent, its Core North America business, tend to experience slightly higher sales volume in the summer months due to summer vacations and increased miles driven, as well as during the periods of time leading into holidays. Both businesses also tend to slow a little from October to February due to inclement weather in parts of the United States and Canada. Valvoline's International business experiences little seasonality due to its geographic diversity and the high percentage of its business in the commercial and industrial lubricants market, which is less influenced by weather.

Environmental and regulatory matters

Valvoline is subject to numerous federal, state, local and non-U.S. environmental health and safety ("EHS") laws and regulations. These laws and regulations govern matters such as safe working conditions; product stewardship; air emissions; discharges to the land and surface waters; generation, handling, storage, transportation, recycling, treatment and disposal of hazardous substances and waste materials; and the registration and evaluation of chemicals. Valvoline maintains policies and procedures to control EHS risks and monitor compliance with applicable EHS laws and regulations. These laws and regulations also require Valvoline to obtain and comply with permits, registrations or other authorizations issued by governmental authorities. These authorities can modify or revoke the Company's permits, registrations or other authorizations and can enforce compliance through fines and injunctions. Valvoline expects to incur ongoing costs to comply with existing and future EHS requirements, including the cost of dedicated EHS resources who are responsible for ensuring its business maintains compliance with applicable laws and regulations.

The Company is also subject to regulation by various U.S. federal regulatory agencies and by the applicable regulatory authorities in countries in which Valvoline's products are manufactured and sold. Such regulations principally relate to the ingredients, classification, labeling, manufacturing, packaging, transportation, advertising and marketing of Valvoline's products. Additionally, as a U.S. entity operating through subsidiaries in non-U.S. jurisdictions, the Company is subject to foreign exchange control, transfer pricing and customs laws that regulate the import and export of goods as well as the flow of funds between Valvoline and its subsidiaries. The Company is

also required to be in compliance with transfer pricing, securities laws and other statutes and regulations, such as the Foreign Corrupt Practices Act (the "FCPA") and other countries' anti-corruption and anti-bribery regimes.

In addition, Valvoline is subject to laws relating to information security, privacy, cashless payments and consumer credit, protection and fraud. An increasing number of governments and industry groups worldwide have established data privacy laws and standards for the protection of personal information, including financial information (e.g., credit card numbers), social security numbers, and health information. The Company is also subject to labor and employment laws, including regulations established by the U.S. Department of Labor and other local regulatory agencies, which sets laws governing working conditions, paid leave, workplace safety, wage and hour standards, and hiring and employment practices.

While there are no current regulatory matters that Valvoline expects to be material to its results of operations, financial position, or cash flows, there can be no assurances that existing or future environmental laws and other regulations applicable to the Company's operations or products will not lead to a material adverse impact on Valvoline's results of operations, financial position or cash flows.

Human capital

As of September 30, 2020, Valvoline had approximately 8,800 employees worldwide (excluding contract employees). "It all starts with our people" is one of Valvoline's core values, and the Company endeavors to create an environment that promotes safety, fosters diversity, encourages creativity, rewards performance and challenges each employee. There are several ways in which Valvoline seeks to attract, develop, and retain highly qualified talent as summarized further below.

Talent acquisition

Successful talent development starts with hiring the right people. Valvoline's talent acquisition is based on qualifications and experiences of target employees, including "building block" traits and capabilities that will allow for strong development early in an employee's tenure. Valvoline utilizes innovative tools and structured processes intended to attract qualified candidates, including engaging job descriptions designed to reach a larger audience, a quick and mobile-friendly application process, online chat features to proactively address applicant questions, and video storytelling that offers a view of Valvoline's culture through the lens of its own employees. These tools have been created to convey what makes Valvoline unique as an employer to better attract diverse and ideal candidates, and these strong branding and sourcing efforts allow Valvoline to select among the very best.

In addition to needs across Valvoline's business, the Company's focus on aggressively growing the Quick Lubes system that included the addition of 77 net new system-wide stores in fiscal 2020, creates a critical need for talent to operate those stores. Valvoline utilizes its tools and processes to attract qualified candidates within the Company's quick lubes operations, including providing support to franchise sourcing efforts. Franchisees are able to take advantage of Valvoline's recruiting and marketing programs, in addition to sharing hiring experiences and best practices across the system to ensure company-owned and franchised locations attract and hire the best candidates to deliver consistent and superior service to Valvoline's customers.

Training and development

The opportunity to grow and develop skills and abilities, regardless of job role, division, or geographical location is critical to the success of Valvoline as a global organization, and each team member is provided training opportunities to develop "Hands-On Expertise" within their area of subject matter knowledge. Valvoline offers voluntary and compulsory regulatory and compliance training programs across the organization based on job role and function. These formal education opportunities may be delivered via virtual or live classes and cover topics from safety, compliance, customer service, sales and product training, as well as management and leadership skills and professional effectiveness. Valvoline also offers approximately 20 hours of live training for its new managers and has many partnerships to deliver quality development opportunities, including those with leading universities, research organizations, companies, and industry and professional organizations. In addition, employees may attend seminars and training programs provided by industry trade and professional organizations. Valvoline also provides tuition assistance for employees enrolled in higher education programs directed at improving their performance or helping them prepare for a future role within the Company.

Within the Valvoline Instant Oil ChangeSM system of company-owned and franchised service center stores, employees are provided regular training. New employees receive 270 hours of training that is generally completed within the first 60 days of employment leading to their first certification and another 225 hours of training in the next 140 days that leads to a promotion. This structured early learning follows the detailed training plan of SuperProTM, an internal management system for executing Valvoline's retail services, which is supported by a proprietary digital learning platform. Employees are trained, tested and certified on these standards as they support and encourage the proper and safe use of personal protective equipment, tools and system practices to drive superior engagement, performance and customer service. Each day may include manager-led training, hands-on learning activities, checklists, virtual learning, and certifications, all of which provide employees with a solid foundation for long-term careers with Valvoline. By engaging team members early, Valvoline provides them the necessary tools to learn and acquire new skills which increases their value as an employee and, most importantly, affords them the opportunity to advance their careers.

Valvoline Instant Oil ChangeSM also provides an Introduction to Management program that occurs multiple times during the year where assistant managers who qualify as potential store managers meet for three days to interact with leadership team members and peers from other stores to learn about Valvoline's culture, share best practices, and receive management training to prepare them for career advancement. The combination of these efforts enable Valvoline to continue a promote-from-within strategy which has led to 100% of service center managers, area managers, and market manager promotions being earned by team members who started in hourly positions at Valvoline Instant Oil ChangeSM.

Health and safety

One of Valvoline's top priorities is protecting the health and safety of its team members, known as its "Vamily." Valvoline offers employer-sponsored health and wellness benefits to 100% of its full-time U.S. employees and their families. Valvoline also provides market competitive benefits in all countries in which Valvoline has operations. In addition, Valvoline strives to create work spaces and practices in all environments that team members work in to help foster a safe and secure environment for every employee and customer. Valvoline emphasizes that "safety is always our priority" through one of its core values.

During the early stages of the COVID-19 pandemic, Valvoline formed a COVID-19 Steering Team that has been leading and coordinating the Company's overall response. This team leads efforts to develop and monitor mitigation and business continuity plans; track all relevant country, state and local government guidelines, directives and regulations; develop and adopt work-from-home plans for non-production and non-store team members; implement safe working protocols for production and service center store teams; assess appropriate return-to-office protocols; and provide timely and transparent communications to global employees and key stakeholders. One of the guiding principles this team continues to rely upon in informing its decisions is protecting the safety and well-being of Valvoline's global teams. Valvoline provided benefits to its employees to cover the cost of COVID-19 testing, promoted its telehealth benefits, expanded its employee assistance and wellbeing plans, amended its 401(k) savings plan to enhance hardship distributions and loan eligibility and repayment terms, and provided short-term incremental pay increases to service center employees who provided essential services during the pandemic, in addition to paid sick leave for quarantined employees.

Diversity and inclusion

The Company believes in an inclusive workforce, where diverse backgrounds are represented, engaged and empowered to inspire innovative ideas and decisions. Valvoline does business in more than 140 countries, and its employees operate across cultures, functions, language barriers and time zones to solve the technical and logistical challenges presented by its worldwide customer base. To foster a more diverse and inclusive culture, Valvoline is focused on (1) promoting a culture of diversity and inclusion that leverages the talents of all employees, and (2) implementing practices that attract, recruit and retain diverse top talent. Valvoline supports employee-led networking groups that are open to all employees and provide a forum to communicate and exchange ideas, build a network of relationships across the Company, and pursue personal and professional development, such as Valvoline Women's International Network. The Company also actively sponsors events that promote diversity and recently formed a Diversity, Equity and Inclusion Council, a working committee to help steer diversity and inclusion efforts across the business and its operations.

Citizenship

Valvoline encourages its team members to support the communities in which they live and in which the Company operates. Valvoline's citizenship efforts extend across the globe and support social and educational needs. At various times throughout the year, Valvoline supports its employees in volunteering their time and talents to give back to their communities. Valvoline employees support the United Way, Red Cross, Children's Miracle Network, Habitat for Humanity, Big Brothers Big Sisters, Building Homes for Heroes, and many more local and global institutions and organizations.

Valvoline launched the Coronavirus Response Fund with other area agencies and companies that support Central Kentucky residents economically impacted by COVID-19 by providing assistance for priorities including food, childcare, transportation and healthcare/prescription needs.

Valvoline's Charitable Giving Program works to build communities that are healthier and have a more promising future through hands-on service, focused generosity and the continuous pursuit of innovative and sustainable solutions. Employees submit proposals each year that impact the areas in which the Company operates and aligned with the focus areas of: (1) disadvantaged families and children, (2) education, or (3) the environment.

Available information

More information about Valvoline is available on the Company's website at <http://www.valvoline.com>. On this website, Valvoline makes available, free of charge, its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports, as well as any beneficial ownership reports of officers and directors filed on Forms 3, 4 and 5. All such reports are available as soon as reasonably practicable after they are electronically filed with, or electronically furnished to, the SEC. Valvoline also makes available, free of charge on its website, its Amended and Restated Articles of Incorporation, By-Laws, Corporate Governance Guidelines, Board Committee Charters, Director Independence Standards and the Global Standards of Business Conduct that apply to Valvoline's directors, officers and employees. These documents are also available in print to any shareholder who requests them. The information contained on Valvoline's website is not part of this Annual Report on Form 10-K and is not incorporated by reference in this document. References to website addresses are provided as inactive textual references only. The SEC also maintains a website (<http://www.sec.gov>) that contains reports, proxy and information statements and other information regarding issuers, including Valvoline, that file electronically with the SEC.

Executive officers of Valvoline

The following is a list of Valvoline's executive officers, their ages, positions and experience during the last five years.

SAMUEL J. MITCHELL, JR. (age 59) is Chief Executive Officer and Director of Valvoline. Mr. Mitchell was appointed as a director and Chief Executive Officer in May 2016 and September 2016, respectively. He served as Senior Vice President of Ashland from 2011 to September 2016 and President of Valvoline from 2002 to September 2016.

MARY E. MEIXELSPERGER (age 60) is Chief Financial Officer of Valvoline since June 2016. Prior to joining Valvoline, Ms. Meixelsperger was Senior Vice President and Chief Financial Officer of DSW Inc. from April 2014 to June 2016 and held the roles of Chief Financial Officer, Controller and Treasurer at Shopko Stores from 2006 to 2014.

JULIE M. O'DANIEL (age 53) is Senior Vice President, Chief Legal Officer and Corporate Secretary of Valvoline since January 2017. Ms. O'Daniel served as General Counsel and Corporate Secretary from September 2016 to January 2017. She served as Lead Commercial Counsel of Valvoline from April 2014 to September 2016 and as Litigation Counsel of Valvoline from July 2007 to April 2014.

JONATHAN L. CALDWELL (age 43) is Senior Vice President and Chief People Officer of Valvoline since April 2020. Mr. Caldwell served as Senior Director, Human Resources of Valvoline from March 2018 to April 2020 and as Senior Director, Global Talent Management of Valvoline from October 2016 to March 2018. Prior to joining Valvoline, Mr. Caldwell was Vice President and Director, Talent Management and Development at Fifth Third Bank from March 2012 to October 2016.

THOMAS A. GERRALD II (age 56) is Senior Vice President, Core North America of Valvoline since September 2016. Mr. Gerrald served as Senior Vice President, U.S. Installer Channel, of Valvoline from June 2012 to September 2016.

HEIDI J. MATHEYS (age 48) is Senior Vice President and Chief Marketing Officer of Valvoline since September 2016. Ms. Matheys served as Senior Vice President, Do-It-Yourself ("DIY") Channels, of Valvoline from August 2013 to September 2016 and as Vice President, Global Brands, of Valvoline from September 2012 to August 2013.

CRAIG A. MOUGHLER (age 63) is Senior Vice President and Chief Supply Chain Officer of Valvoline since March 2019. Mr. Moughler served as Senior Vice President, International and Product Supply from September 2016 to March 2019. He served as Senior Vice President, International of Valvoline from October 2002 to September 2016.

JAMAL K. MUASHSHER (age 45) is Senior Vice President, International of Valvoline since March 2019. Mr. Muashsher served as Vice President, Marketing, Digital and Customer Experience of Core North America from June 2016 to March 2019 and as Director of Marketing, DIY, of Valvoline from August 2014 to June 2016.

ANTHONY R. PUCKETT (age 58) is Senior Vice President and President, Quick Lubes of Valvoline since September 2016. He served as President of Valvoline Instant Oil Change from August 2007 to September 2016.

MICHAEL S. RYAN (age 53) is Chief Accounting Officer and Controller of Valvoline since September 2019. Prior to joining Valvoline, Mr. Ryan was Senior Vice President, Financial Operations and Chief Accounting Officer at Utz Quality Foods, LLC from 2017 to 2019. Prior to that role, Mr. Ryan was Interim Chief Financial Officer at SolAero Technologies Corporation from 2016 to 2017 and also held roles of Senior Vice President, Chief Accounting Officer at Laureate Education, Inc. from 2015 to 2016 and Senior Vice President, Chief Accounting Officer and Controller, at Hanesbrands, Inc. from 2012 to 2015.

ITEM 1A. RISK FACTORS

The following “risk factors” could materially and adversely affect Valvoline’s business, operations, financial position or future financial performance. This information should be considered when reading the rest of this Annual Report on Form 10-K, including Management’s Discussion and Analysis and the consolidated financial statements and related notes. These factors could cause future results to differ from those in forward-looking statements and from historical trends.

Risks related to the industries in which Valvoline operates

Because of the concentration of Valvoline’s sales to a small number of retailers, the loss of one or more, or a significant reduction in orders from, its top retail customers could adversely affect its financial results, as could the loss of one of its distributor relationships.

Valvoline’s Core North America segment’s sales represented approximately 40% of Valvoline’s total sales in fiscal 2020. Five key retailers together accounted for 49% of Core North America’s fiscal 2020 sales and 45% of the Company’s outstanding trade accounts receivable as of September 30, 2020. One of these key retailers accounted for greater than 19% of Core North America’s fiscal 2020 sales. Valvoline’s volume of sales to these customers fluctuates and can be influenced by many factors, including product pricing, competition for shelf space, purchasing patterns and promotional activities. For example, Valvoline’s retail customers have increasingly shifted shelf distribution towards private label lubricant products, which has negatively impacted Core North America’s retail channel DIY branded lubricant sales. Additionally, many of Valvoline’s retail customers have changed their promotional strategies, increasing the frequency and number of brands promoted at any given time, including private label, which has further negatively impacted branded lubricant sales within the retail channel. In response to these market dynamics, Valvoline has strengthened its consumer messaging, optimized pricing in relation to these promotional strategies and focused its efforts on increasing synthetic lubricant sales; however, if those strategies are not effective, or if Valvoline is unable to adapt to changing market dynamics, Valvoline’s results of operations could be negatively affected. The loss of, or significant reduction in orders from, one of Valvoline’s top five retail customers or any other significant customer could have a material adverse effect on its business, financial condition, results of operations or cash flows, as could customer disputes regarding shipments, fees, merchandise condition or related matters. Valvoline’s inability to collect accounts receivable from one of its major customers, or a significant deterioration in the financial condition of one of these customers, including a bankruptcy filing or a liquidation, could also have a material adverse effect on Valvoline’s financial condition, results of operations or cash flows.

Valvoline also relies on independent distributors to sell and deliver its products. The consolidation of distributors, loss of a relationship with a distributor, significant disagreement with a distributor, or significant deterioration in the financial condition of a distributor could also have a material adverse effect on Valvoline’s financial condition, results of operations or cash flows.

Valvoline faces significant competition from other companies, which places downward pressure on prices and margins and may adversely affect Valvoline’s business and results of operations.

Valvoline operates in highly competitive markets, competing against a number of domestic and international companies. Competition is based on several key criteria, including brand recognition, product performance and quality, product price, product availability and security of supply, ability to develop products in cooperation with customers and customer service, as well as the ability to bring innovative products or services to the marketplace. Certain key competitors, including Shell/Pennzoil, BP/Castrol and Exxon/Mobil, are significantly larger than Valvoline and have greater financial resources and more diverse portfolios of products and services, leading to greater operating and financial flexibility. As a result, these competitors may be better able to withstand adverse changes in conditions within the relevant industry, retail market dynamics, the prices of raw materials and energy or general economic conditions. In addition, competitors’ pricing decisions could compel Valvoline to decrease its prices, which could negatively affect Valvoline’s margins and profitability. Valvoline continues to see increasing competition from private label competitors, which has negatively impacted branded lubricant sales in the retail channel as price gaps between private label and branded products has grown. Further competition from private label competitors, including the entry of new private label competitors, or additional competition in markets served by Valvoline, could adversely affect margins and profitability and could lead to a reduction in market share. Also, Valvoline competes in certain markets that are relatively flat to declining, such as the U.S. passenger car motor oil

market. If Valvoline's strategies for dealing with these markets and leveraging market opportunities are not successful, its results of operations could be negatively affected.

Rising and volatile raw material costs and supply-chain constraints or disruptions could adversely affect Valvoline's results of operations.

Rising and volatile raw material prices, especially for base oil and lubricant additives, have in the past and may in the future, negatively impact Valvoline's costs, results of operations and the valuation of its inventory. Valvoline may not always be able to raise prices in response to increased costs of raw materials or may experience a lag in passing through such cost increases, as the ability to pass on the costs of such price increases is largely dependent upon market conditions. Likewise, reductions in the valuation of Valvoline's inventory due to market volatility may not be recovered and could result in losses.

Valvoline purchases certain products and raw materials from suppliers, often pursuant to written supply contracts. If those suppliers are unable to meet Valvoline's orders in a timely manner or choose to terminate or otherwise avoid contractual arrangements, Valvoline may not be able to make alternative supply arrangements or may face increased costs from alternative suppliers. For base oils, Valvoline's suppliers are primarily large oil producers, many of whom operate oil lubricant production and sales businesses as part of their enterprise. There are risks inherent in obtaining important raw materials from actual or potential competitors, including the risk that applicable antitrust laws may be inadequate to mitigate Valvoline's exposure to these risks. Valvoline purchases substantially all of its lubricant additives from four key suppliers. Because the industry is characterized by a limited number of lubricant additives suppliers, there are a limited number of alternative suppliers with whom Valvoline could transact in the event of a disruption to its existing supply relationships; for example, due to disruptions to its suppliers' operations caused by natural disasters, severe weather conditions, climate change or significant changes in trade regulations. The inability of Valvoline's suppliers to meet its supply demands could also have a material adverse effect on its business.

Also, domestic and global government regulations related to the manufacture or transport of certain raw materials may impede Valvoline's ability to obtain those raw materials on commercially reasonable terms. If Valvoline is unable to obtain and retain qualified suppliers under commercially acceptable terms, its ability to manufacture and deliver products in a timely, competitive and profitable manner or grow its business successfully could be adversely affected.

Demand for Valvoline's products and services could be adversely affected by consumer spending trends, declining economic conditions, industry trends and a number of other factors, all of which are beyond its control.

Demand for Valvoline's products and services may be affected by a number of factors it cannot control, including the number and age of vehicles in current service, regulation and legislation, technological advances in the automotive industry and changes in engine technology, including the adoption rate of electric or other alternative engine technologies, changing automotive OEM specifications and longer recommended intervals between oil changes. In addition, during periods of declining economic conditions, consumers may defer vehicle maintenance. Similarly, increases in energy prices or other factors may cause miles driven to decline, resulting in less vehicle wear and tear and lower demand for maintenance, which may lead to consumers deferring purchases of Valvoline's products and services. All of these factors, which impact metrics such as drain intervals and oil changes per day, could result in a decline in the demand for Valvoline's products and services and adversely affect its sales, cash flows and overall financial condition.

Failure to develop and market new products, services and production technologies could impact Valvoline's competitive position and have an adverse effect on its business and results of operations.

The lubricants industry is subject to periodic technological change and ongoing product improvements. To maintain margins and remain competitive, Valvoline must successfully innovate and introduce new products, improvements or services that appeal to its customers and ultimately to global consumers. Changes in additive technologies, base oil production techniques and sources, and the demand for improved performance by OEMs and consumers place particular pressure on Valvoline to continue to improve its product offerings. In addition, the adoption of electric vehicles is increasing and is expected to increase at a faster pace in future years as certain states and international governments implement limits on the sale of vehicles with internal combustion engines, which reduces demand for lubricants, but expands the opportunity for other products and services required by electric vehicles, including

coolants, fluids and greases. If Valvoline is unable to develop and market products and services for electric vehicles, its business and results of operations could be adversely impacted. Further, Valvoline's efforts to respond to changes in consumer demand in a timely and cost-efficient manner to drive growth could be adversely affected by difficulties or delays in product development and service innovation, including the inability to identify viable new products, successfully complete research and development, obtain regulatory approvals, obtain intellectual property protection or gain market acceptance of new products or service techniques. Due to the lengthy development process, technological challenges and intense competition, there can be no assurance that any of the products or services Valvoline is currently developing, or could develop in the future, will achieve substantial commercial success. The time and expense invested in product development may not result in commercial products or provide revenues. Valvoline could be required to write-off its investments related to a new product that does not reach commercial viability. Moreover, Valvoline may experience operating losses after new products are introduced and commercialized because of high start-up costs, unexpected manufacturing costs or problems, or lack of demand.

Damage to Valvoline's brand and reputation could have an adverse effect on its business.

Maintaining Valvoline's strong reputation with both consumers and customers is a key component of its business. Product liability claims, false advertising claims, product or service complaints or recalls, its inability to ship, sell or transport affected products and governmental investigations could result in substantial and unexpected expenditures and affect consumer or customer confidence in Valvoline's products and services, which may materially and adversely affect its business operations, decrease sales and increase costs.

Valvoline manufactures and markets a variety of products, such as automotive and industrial lubricants and automotive coolants and chemicals, and provides automotive maintenance services. If allegations are made that some of Valvoline's products have failed to perform up to consumers' or customers' expectations or have caused damage or injury to individuals or property, or that Valvoline's services were not provided in a manner consistent with its vision and values, the public may develop a negative perception of Valvoline and its brands. In addition, if Valvoline's franchisees, Express Care and joint venture operators experience service failures or do not successfully operate their quick lube service centers in a manner consistent with Valvoline's standards, its brand, image and reputation could be harmed, which in turn could negatively impact its business and operating results. In addition, if any party with whom Valvoline has a sponsorship relationship were to generate negative publicity, Valvoline's brand image could be harmed. A negative public perception of Valvoline's brands, whether justified or not, could impair its reputation, involve it in litigation, damage its brand equity and have a material adverse effect on its business. In addition, damage to the reputation of Valvoline's competitors or others in its industry could negatively impact Valvoline's reputation and business.

Risks related to executing Valvoline's strategy

Valvoline has set aggressive growth goals for its business, including increasing sales, cash flow, market share, margins and number of Quick Lubes stores, to achieve its long-term strategic objectives. Execution of Valvoline's growth strategies and business plans to facilitate that growth involves a number of risks.

Valvoline has set aggressive growth goals for its business to meet its long-term strategic objectives and improve shareholder value by aggressively growing Quick Lubes organically and through acquisitions, maintaining Core North America and developing International with the goal of becoming a more service-driven business. Valvoline's failure to meet one or more of these goals or objectives could negatively impact its business and is one of the most important risks that Valvoline faces. Aspects of that risk include, among others, changes to the global economy, failure to identify acquisition targets or real estate for new stores to grow Quick Lubes, construction costs or delays limiting new store growth, failure to develop products or services for electric vehicles, changes to the competitive landscape, including those related to automotive maintenance recommendations and consumer preferences, continued private label growth, entry of new competitors, failure to grow the Valvoline brand internationally, attraction and retention of skilled employees, failure to successfully develop and implement digital platforms to support the Company's growth initiatives, the potential failure of product innovation plans, failure to comply with existing or new regulatory requirements, failure to maintain a competitive cost structure and other risks outlined in greater detail in this "Risk Factors" section.

Valvoline may be unable to execute its growth strategy, and acquisitions, joint ventures, strategic alliances and investments could result in operating difficulties, dilution and other harmful consequences that may adversely impact Valvoline's business and results of operations.

Acquisitions, particularly for the Quick Lubes business segment, are an important element of Valvoline's overall growth strategy. In addition, building strategic alliances for distribution and manufacturing, particularly in international markets, including through joint venture partnerships, product distribution and toll manufacturing arrangements, are also an important element of Valvoline's overall growth strategy. Valvoline expects to continue to evaluate and enter into discussions regarding a wide array of potential strategic transactions, and to continue to grow its Quick Lubes business organically and through acquisitions. An inability to execute these plans could have a material adverse impact on Valvoline's financial condition and results of operations. In addition, the anticipated benefits of Valvoline's acquisitions may not be realized and the process of integrating an acquired company, business, or product may create unforeseen operating difficulties or expenditures.

Valvoline's acquisitions, investments and strategic alliances could also result in dilutive issuances of its equity securities, the incurrence of debt, contingent liabilities or amortization expenses, impairment of goodwill or purchased long-lived assets and restructuring charges, any of which could harm its financial condition, results of operations and cash flows.

The business model for Valvoline's Quick Lubes business, including its relationships with franchisees, presents a number of risks.

The Quick Lubes business is made up of an international network of both company-owned and franchised stores. Valvoline's success relies in part on the financial success and cooperation of its franchisees. However, Valvoline has limited influence over their operations. Valvoline's franchisees manage their businesses independently and are responsible for the day-to-day operations of approximately 60% of Quick Lube system stores as of September 30, 2020. Valvoline's royalty and other payments from franchised stores are largely dependent on franchisee sales. Valvoline's franchisees may have limited or no sales growth, and Valvoline's revenues and margins could be negatively affected as a result. In addition, if sales or business performance trends worsen for franchisees, their financial results may deteriorate, which could result in, among other things, store closures, delayed or reduced royalty payments to Valvoline and reduced growth in the number of Quick Lube stores.

Valvoline's success also depends on the willingness and ability of its independent franchisees to implement major initiatives, which may require additional investment by them, and remain aligned with Valvoline on operating, promotional and capital-intensive reinvestment plans. The ability of Valvoline's franchisees to contribute to the achievement of Valvoline's overall plans is dependent in large part on the availability of funding to its franchisees at reasonable interest rates and may be negatively impacted by the financial markets in general or the creditworthiness of individual franchisees. The size of Valvoline's largest franchisees creates additional risk due to their importance to Quick Lube's growth strategy, requiring their cooperation and alignment with Valvoline's initiatives.

Valvoline is the primary supplier of products to all Quick Lube stores. The growth and performance of Valvoline's lubricants and other product lines depends in large part on the performance of its Quick Lubes business, potentially amplifying the negative effect of the other risks related to the Quick Lubes business model.

Valvoline shares in ownership of joint ventures, which may limit its ability to manage third-party risks associated with these projects.

For financial or strategic reasons, Valvoline conducts a portion of its business through joint ventures. Joint ventures, particularly Valvoline's existing 50/50 joint ventures with Cummins in India, China and Argentina, are an important part of its growth strategy internationally. In these joint ventures, Valvoline shares influence over the operation of the joint venture and its assets, but does not have a controlling interest or vote. Therefore, joint ventures may involve risks such as the possibility that a joint venture partner in an investment might become bankrupt, be unable to meet its capital contribution obligations, have economic or business interests or goals that are inconsistent with Valvoline's business interests or goals, or take actions that are contrary to Valvoline's direction or to applicable laws and regulations. If Valvoline's relationship with one of its joint venture partners were to deteriorate, it could negatively impact Valvoline's ability to achieve its growth goals internationally. In addition, joint venture partners could take actions binding on the joint venture without Valvoline's consent, or Valvoline may be unable to take action without the concurrence of its joint venture partners. Consequently, actions by the joint venture, joint venture partner

or other third-party could expose Valvoline to claims for damages, financial penalties and reputational harm, any of which could have an adverse effect on its business and operations. Although joint ventures may generate positive cash flow, in some cases they may be unable or unwilling to distribute that cash to the joint venture partners.

Risks related to operating Valvoline's business

Valvoline's significant global operations subject it to risks, which could adversely affect its business, financial condition and results of operations.

Sales from the International business segment accounted for 22% of Valvoline's sales for fiscal 2020 and Valvoline expects sales from international markets to grow in the future. Also, Valvoline has multiple manufacturing locations outside of the United States, which will increase as Valvoline's new blending and packaging plant in China begins production, expected in fiscal 2021. Accordingly, its business is subject to risks related to the differing legal, political, cultural, social and regulatory requirements and economic conditions of many jurisdictions.

The global nature of Valvoline's business presents difficulties in hiring and maintaining a workforce in certain countries. Fluctuations in exchange rates may affect product demand and may adversely affect the profitability in U.S. dollars of products and services provided in other countries. In addition, other countries may impose additional withholding taxes or otherwise tax Valvoline's income, or adopt other restrictions on trade or investment, including currency exchange controls. The imposition of new or additional tariffs or other significant changes in trade regulations are also risks that could impair Valvoline's financial performance. If Valvoline is subject to new or additional tariffs, operating costs could increase and Valvoline may not be able to recapture those costs.

Certain legal and political risks are also inherent in the operation of a company with Valvoline's global scope. For example, it may be more difficult for Valvoline to enforce its agreements or collect receivables through other legal systems. There is a risk that non-U.S. governments may nationalize private enterprises in certain countries where Valvoline operates. Social and cultural standards in certain countries may not support compliance with Valvoline's corporate policies including those that require compliance with substantive laws and regulations. Also, changes in general economic and political conditions in countries where Valvoline operates are a risk to Valvoline's financial performance and future growth. As Valvoline continues to operate its business globally, its success will depend, in part, on its ability to anticipate and effectively manage these and other related risks. There can be no assurance that the consequences of these and other factors relating to Valvoline's global operations will not have an adverse effect on its business, financial condition or results of operations.

Adverse developments in the global economy or in regional economies and potential disruptions of financial markets could negatively impact Valvoline's customers and suppliers, and therefore have a negative impact on its results of operations.

A global or regional economic downturn may reduce customer demand or inhibit Valvoline's ability to produce and sell products. Valvoline's business and operating results are sensitive to global and regional economic downturns, credit market tightness, declining consumer and business confidence, fluctuating commodity prices, volatile exchange rates, changes in interest rates, sovereign debt defaults and other challenges, including those related to international sanctions and acts of aggression or threatened aggression that can affect the global economy. With 78% of Valvoline's sales coming from North America in fiscal 2020, Valvoline is particularly sensitive to the risk of an economic slowdown or downturn in that region. In the event of adverse developments or stagnation in the economy or financial markets, Valvoline's customers may experience deterioration of their businesses, reduced demand for their products, cash flow shortages and difficulty obtaining financing. As a result, existing or potential customers might delay or cancel plans to purchase products and may not be able to fulfill their obligations to Valvoline in a timely fashion. Further, suppliers may experience similar conditions, which could impact their ability to fulfill their obligations to Valvoline. A weakening or reversal of the global economy or a substantial part of it could negatively impact Valvoline's business, results of operations, financial condition and ability to grow.

Pandemics, epidemics or disease outbreaks, such as the novel coronavirus, may disrupt Valvoline's business and operations, which could materially affect Valvoline's financial condition, results of operations and forward-looking expectations.

Disruptions caused by pandemics, epidemics or disease outbreaks, such as COVID-19, in the United States or globally, could materially affect Valvoline's results of operations, financial condition and forward-looking expectations. The COVID-19 pandemic negatively impacted Valvoline's business and results of operations during

fiscal 2020 and adverse impacts are expected to continue in future periods, which Valvoline is unable to reasonably predict due to numerous uncertainties, including the duration and severity of the pandemic.

Specifically, COVID-19 lockdowns and stay-at-home guidelines significantly impacted miles driven in most of Valvoline's key markets in fiscal 2020 resulting in lower lubricant volumes across Valvoline's reportable segments. In addition, Valvoline may voluntarily elect or be required to temporarily close or reduce operations at its Quick Lubes' service center stores, lubricant blending and packaging plants or remove its employees and personnel from the field for their protection. COVID-19 has also had a negative impact on Valvoline's franchisees. Certain franchises reduced hours or temporarily closed at the discretion of the respective independent operator. The failure of one or more franchisees would have an adverse impact on Valvoline's business due to their impact on Valvoline's growth, financial and operating performance.

In fiscal 2020, the Company restricted all non-essential travel and implemented work-from-home protocols for employees in virtually all locations globally, other than those in Valvoline's retail service center stores, production and distribution facilities, and those restrictions have largely continued into fiscal 2021. The suspension of travel and doing business in-person could negatively impact the Company's marketing efforts, challenge the ability to enter into customer contracts in a timely manner, or create operational or other challenges, any of which could harm Valvoline's business. During the COVID-19 pandemic, Valvoline also has seen an increase in attempts to breach its information technology systems with the implementation of work-from-home protocols, including cyber-security threats such as phishing, spam emails, hacking, social engineering, and malicious software, increasing the risks associated with a breach of or failure of Valvoline's information technology systems.

These impacts and any additional developments as a result of COVID-19, or other pandemics, epidemics or disease outbreaks have had adverse impacts on Valvoline's business and results of operations and may continue to adversely affect Valvoline's business, results of operations, liquidity, financial condition, and forward-looking expectations, particularly if these impacts continue for an extended period of time. The extent to which the spread of COVID-19 impacts Valvoline's business will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the duration and the severity of the spread of COVID-19 and the actions to contain the virus or treat its impact, among others. These events, if they continue to grow in scope, intensify in severity or are sustained for a longer period of time may materially adversely affect Valvoline's ability to implement its growth plans, including, without limitation, delay construction or acquisition of new Quick Lubes service center stores or negatively impact Valvoline's ability to successfully execute plans to enter into new markets; reduce demand for Valvoline's products and services; cause Valvoline to experience inefficiencies in the supply chain, including but not limited to, the delivery of products and services to Valvoline's customers, receipt of raw materials from suppliers or increased costs of raw materials; reduce sales or profitability; negatively impact Valvoline's ability to maintain operations; or lead to significant disruption of global financial markets, which may reduce the Company's ability to access capital and, in the future, negatively affect the Company's liquidity.

Valvoline uses information technology systems to conduct business, and a cyber security threat, privacy/data breach, or failure of a key information technology system could adversely affect Valvoline's business and reputation.

Valvoline relies on its information technology systems, including systems which are managed or provided by third-party service providers, to conduct its business. Despite employee training and other measures to mitigate them, cyber-security threats to its information technology systems, and those of its third-party service providers, are increasing and becoming more advanced and breaches could occur as a result of denial-of-service attacks or other cyber-attacks, hacking, phishing, viruses, malicious software, ransomware, computer malware, social engineering, break-ins, security breaches or due to error or misconduct by its employees, contractors or third-party service providers. A breach of or failure of Valvoline's information technology systems could lead to the loss and destruction of trade secrets, confidential information, proprietary data, intellectual property, customer and supplier data, and employee personal information, and could disrupt business operations which could adversely affect Valvoline's relationships with business partners and harm its brands, reputation and financial results. Valvoline's customer data may include names, addresses, phone numbers, email addresses and payment account information, among other information. Depending on the nature of the customer data that is compromised, Valvoline may also have obligations to notify users, law enforcement or payment companies about the incident and may need to provide some form of remedy, such as refunds for the individuals affected by the incident. Valvoline could also face fines and penalties should it fail to adequately notify affected parties pursuant to new and evolving privacy laws in various jurisdictions in which it does business.

Business disruptions from natural, operational and other catastrophic risks could seriously harm Valvoline's operations and financial performance. In addition, a catastrophic event at one of Valvoline's facilities or involving its products or employees could lead to liabilities that could further impair its operations and financial performance.

Business disruptions, including those related to operating hazards inherent in the production of lubricants, natural disasters, severe weather conditions, climate change, supply or logistics disruptions, increasing costs for energy, temporary plant and/or power outages, information technology systems and network disruptions, cyber-security breaches, terrorist attacks, armed conflicts, war, pandemic diseases, fires, floods or other catastrophic events, could seriously harm Valvoline's operations, as well as the operations of Valvoline's customers and suppliers, and may adversely impact Valvoline's financial performance. Although it is impossible to predict the occurrence or consequences of any such events, they could result in reduced demand for Valvoline's products; make it difficult or impossible for Valvoline to manufacture its products, deliver products and services to its customers, or receive raw materials from suppliers; lead to increased costs of raw materials; or create delays and inefficiencies in the supply chain. In addition to leading to a serious disruption of Valvoline's businesses, a catastrophic event at one of Valvoline's facilities or involving its products or employees could lead to substantial legal liability to or claims by parties allegedly harmed by the event.

While Valvoline maintains business continuity plans that are intended to allow it to continue operations or mitigate the effects of events that could disrupt its business, Valvoline cannot provide assurances that its plans would fully protect it from all such events. In addition, insurance maintained by Valvoline to protect against property damage, loss of business and other related consequences resulting from catastrophic events is subject to significant retentions and coverage limitations, depending on the nature of the risk insured. This insurance may not be sufficient to cover all of Valvoline's damages or damages to others in the event of a catastrophe. In addition, insurance related to these types of risks may not be available now or, if available, may not be available in the future at commercially reasonable rates.

Regulatory, legal, and financial risks

Data protection requirements could increase operating costs and requirements and a breach in information privacy or other related risks could negatively impact operations.

Valvoline is subject to federal, state, and non-U.S. laws, directives, and regulations relating to the collection, use, retention, disclosure, security and transfer of personal data relating to its customers and employees. These laws, directives and regulations, and their interpretation and enforcement continue to evolve and may be inconsistent from jurisdiction to jurisdiction. For example, the General Data Protection Regulation ("GDPR"), applies to all of Valvoline's activities conducted from an establishment in the European Union ("EU") and may also apply to related products and services that Valvoline offers to customers in the EU. Complying with the GDPR and similar emerging and changing privacy and data protection requirements may cause Valvoline to incur substantial costs. Noncompliance with these legal obligations relating to privacy and data protection could result in penalties, legal proceedings by governmental entities or others, and significant legal and financial exposure and could affect its ability to retain and attract customers. Any failure or perceived failure by Valvoline or any third parties with which it does business to comply with these laws, rules and regulations, or with other obligations to which Valvoline may be or become subject, may result in actions against Valvoline by governmental entities, private claims and litigation, fines, penalties or other liabilities. Any such action would be expensive to defend, damage Valvoline's reputation and adversely affect business, operating results, financial position and cash flows.

The impact of changing laws or regulations or the manner of interpretation or enforcement of existing laws or regulations could adversely impact Valvoline's financial performance and restrict its ability to operate its business or execute its strategies.

New laws or regulations, or changes in existing laws or regulations or the manner of their interpretation or enforcement, could increase Valvoline's cost of doing business and restrict its ability to operate its business or execute its strategies. This risk includes, among other things, compliance with a myriad of U.S. and non-U.S. tax laws and regulations; anti-competition laws and regulations; product compliance regulations, including the EU's Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") regulation; anti-corruption and anti-bribery laws, including FCPA and the U.K. Bribery Act; anti-money-laundering laws; economic sanctions and export control laws and regulations, including those administered by the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC"); customs laws; and other laws governing Valvoline's operations.

Although Valvoline has implemented policies and procedures to ensure compliance with these laws and regulations, it cannot be sure that its policies and procedures are sufficient or that directors, officers, employees, representatives, distributors, consultants and agents have not engaged and will not engage in conduct for which Valvoline may be held responsible, nor can Valvoline be sure that its business partners have not engaged and will not engage in conduct that could materially affect their ability to perform their contractual obligations to Valvoline or even result in its being held liable for such conduct. Violations of these laws or regulations may result in severe criminal or civil sanctions or penalties, or significant changes in existing laws and regulations may subject Valvoline to other liabilities, which could have a material adverse effect on its business, financial condition, cash flows and results of operations.

Valvoline's substantial indebtedness may adversely affect its business, results of operations and financial condition.

Valvoline has substantial indebtedness and financial obligations. As of September 30, 2020, Valvoline had outstanding indebtedness of approximately \$2.0 billion, with a borrowing capacity remaining under its existing credit facilities of \$548 million. Valvoline may incur substantial additional debt from time to time to finance working capital, capital expenditures, investments or acquisitions, or for other general corporate purposes.

Valvoline's substantial indebtedness could adversely affect its business, results of operations and financial condition by, among other things: requiring Valvoline to dedicate a substantial portion of its cash flows to pay principal and interest on its debt, which would reduce the availability of its cash flow to fund working capital, capital expenditures, acquisitions, execution of its growth strategy and other general corporate purposes; limiting Valvoline's ability to borrow additional amounts to fund working capital, capital expenditures, acquisitions, debt service requirements, execution of its growth strategy and other general corporate purposes; making Valvoline more vulnerable to adverse changes in general economic, industry and regulatory conditions and in its business by limiting its flexibility in planning for or reacting to changing conditions; placing Valvoline at a competitive disadvantage compared with its competitors that have less debt and lower debt service requirements; making Valvoline more vulnerable to increases in interest rates since some of its indebtedness is subject to variable rates of interest; and making it more difficult for Valvoline to satisfy its financial obligations.

In addition, Valvoline may not be able to generate sufficient cash flows to repay its indebtedness when it becomes due and to meet its other cash needs. If Valvoline is not able to pay its debts as they become due, it could be in default under the terms of its indebtedness. Valvoline might also be required to pursue one or more alternative strategies to repay indebtedness, such as selling assets, refinancing or restructuring its indebtedness or selling additional debt or equity securities. Valvoline may not be able to refinance its debt or sell additional debt or equity securities or its assets on favorable terms, if at all, and if it must sell its assets, it may negatively affect Valvoline's ability to generate revenues.

Valvoline's pension and other postretirement benefit plan obligations are currently underfunded, and Valvoline may have to make significant cash payments to some or all of these plans, which would reduce the cash available for its business.

In connection with Valvoline's separation from Ashland, Valvoline assumed certain of Ashland's historical pension and other postretirement benefit plans and related liabilities. The most significant of these plans, the U.S. qualified pension plans, are estimated to be underfunded by \$158 million as of September 30, 2020. The funded status of Valvoline's pension plans is dependent upon many factors, including returns on invested assets, the level of certain market interest rates and the discount rate used to determine pension obligations. Valvoline has taken a number of actions to reduce the risk and volatility associated with the U.S. pension plans, however, changing market conditions or laws and regulations could require material increases in the expected cash contributions to these plans in future years. Specifically, unfavorable returns on plan assets or unfavorable changes in applicable laws or regulations could materially change the timing and amount of required plan funding. In addition, a decrease in the discount rate used to determine pension obligations could result in an increase in the valuation of pension obligations, which could affect the reported funded status of Valvoline's U.S. pension plans and future contributions. Similarly, an increase in discount rates could increase the periodic pension cost in subsequent fiscal years. If any of these events occur, Valvoline may have to make significant cash payments to its U.S. pension plans, which would reduce the cash available for its business. Finally, Valvoline's policy to recognize changes in the fair value of the pension assets and liabilities annually and as otherwise required through mark to market accounting could result in volatility in Valvoline's earnings, which could be material.

Valvoline may fail to adequately protect its intellectual property rights or may be accused of infringing the intellectual property rights of third parties.

Valvoline relies heavily upon its trademarks, domain names and logos, as well as upon trade secrets, to market its brands and to build and maintain brand loyalty and recognition. Valvoline also relies on a combination of laws and contractual restrictions with employees, customers, suppliers, affiliates and others, to establish and protect its various intellectual property rights. For example, Valvoline has generally registered and continues to register and renew, or secure by contract where appropriate, trademarks and service marks as they are developed and used, and reserve, register and renew domain names as appropriate. Effective trademark protection may not be available or may not be sought in every country in which Valvoline's products are made available and contractual disputes may affect the use of marks governed by private contract. Similarly, not every variation of a domain name may be available to or be registered by Valvoline, even if available.

Valvoline generally seeks to apply for patents or for other similar statutory protections as and if it deems appropriate, based on then-current facts and circumstances, and will continue to do so in the future. No assurances can be given that any patent application Valvoline has filed or will file will result in a patent being issued, or that any existing or future patents will afford adequate or meaningful protection against competitors or against similar technologies. In addition, no assurances can be given that third parties will not create new products or methods that achieve similar results without infringing upon patents Valvoline owns. Furthermore, the terms of patents are finite and the patents that Valvoline owns will eventually expire after the statutory term of patent protection ends in the jurisdiction where such patents are issued.

Despite these measures, Valvoline's intellectual property rights may still not be protected in a meaningful manner, challenges to contractual rights could arise and third parties could copy or otherwise obtain and use Valvoline's intellectual property without authorization, including its trade secrets and other confidential intellectual property. The occurrence of any of these events could result in the erosion of Valvoline's brands and limit its ability to market its brands using its various trademarks, cause Valvoline to lose such trade secrets, as well as impede its ability to effectively compete against competitors with similar products and services, any of which could adversely affect its business, financial condition and results of operations.

From time to time, Valvoline has been subject to legal proceedings and claims, including claims of alleged infringement of trademarks, copyrights, patents and other intellectual property rights held by third parties. In the future, third parties may sue Valvoline for alleged infringement of their proprietary or intellectual property rights. Valvoline may not be aware of whether its products do or will infringe existing or future patents or other intellectual property rights of others. In addition, litigation may be necessary to enforce Valvoline's intellectual property rights, protect its trade secrets or determine the validity and scope of proprietary rights claimed by others. Any litigation or other intellectual property proceedings of this nature, regardless of outcome or merit, could result in substantial costs and diversion of management and technical resources, or loss of rights in Valvoline's intellectual property, any of which could adversely affect Valvoline's business, financial condition and results of operations.

Valvoline has incurred, and will continue to incur, costs as a result of EHS and hazardous substances liabilities and related compliance requirements. These costs could adversely impact Valvoline's cash flow, its results of operations or financial condition.

Valvoline is subject to extensive federal, state, local and non-U.S. laws, regulations, rules and ordinances relating to pollution, protection of the environment and human health and safety, as well as the generation, storage, handling, treatment, disposal and remediation of hazardous substances and waste materials. Valvoline has incurred, and will continue to incur, costs and capital expenditures to comply with these laws and regulations.

EHS regulations change frequently, and such regulations and their enforcement have tended to become more stringent over time. Accordingly, changes in EHS laws and regulations and the enforcement of such laws and regulations could interrupt Valvoline's operations, require modifications to its facilities or cause it to incur significant liabilities, costs or losses that could adversely affect its profitability. Actual or alleged violations of EHS laws and regulations could result in restrictions or prohibitions on plant operations as well as substantial damages, penalties, fines, civil or criminal sanctions and remediation costs.

Valvoline's business involves the production, storage and transportation of hazardous substances. Under some environmental laws, Valvoline may be strictly liable and/or jointly and severally liable for environmental damages

caused by releases of hazardous substances and waste materials into the environment. For instance, under relevant laws and regulations Valvoline may be deemed liable for soil and/or groundwater contamination at sites it currently owns and/or operates even though the contamination was caused by a third party such as a former owner or operator, and at sites it formerly owned and operated if the release of hazardous substances or waste materials was caused by it or by a third party during the period it owned and/or operated the site. Valvoline also may be deemed liable for soil and/or groundwater contamination at sites to which it sent hazardous wastes for treatment or disposal, notwithstanding that the original treatment or disposal activity accorded with all applicable regulatory requirements.

Risks related to Valvoline's separation from Ashland

The Distribution could result in significant tax liability to Ashland, and in certain circumstances, Valvoline could be required to indemnify Ashland for material taxes pursuant to indemnification obligations.

Ashland obtained a written opinion of counsel to the effect that the Distribution should qualify for non-recognition of gain and loss under Section 355 of the Internal Revenue Code of 1986, as amended (the "Code"). The opinion of counsel does not address any U.S. state, local or non-U.S. tax consequences of the Distribution. The opinion assumes that the Distribution is completed according to the terms of the Separation Agreement and relies on the facts as described in the Separation Agreement, the Tax Matters Agreement, other ancillary agreements, the information statement distributed to Ashland's shareholders in connection with the Distribution and a number of other documents. In addition, the opinion is based on certain representations as to factual matters from, and certain covenants by, Ashland and Valvoline. The opinion cannot be relied on if any of the assumptions, representations or covenants is incorrect, incomplete or inaccurate or is violated in any material respect.

The opinion of counsel is not binding on the Internal Revenue Service (the "IRS") or the courts, and thus there can be no assurance that the IRS or a court will not take a contrary position. Ashland has not requested, and to the best of Valvoline's knowledge does not intend to request, a ruling from the IRS regarding the U.S. federal income tax consequences of the Distribution.

If the Distribution were determined not to qualify for non-recognition of gain and loss, then Ashland would recognize a gain as if it had sold its Valvoline common stock in a taxable transaction in an amount up to the fair market value of the common stock it distributed in the Distribution. In addition, certain reorganization transactions undertaken in connection with the separation and the Distribution could be determined to be taxable, which could result in additional taxable gain. Under certain circumstances set forth in the Tax Matters Agreement, Valvoline could have a substantial indemnification obligation to Ashland with respect to the tax associated with some or all of such gain, which could have a material adverse impact on Valvoline's financial condition.

Valvoline will have joint and several liability with Ashland for the consolidated U.S. federal income taxes of the Ashland consolidated group for the taxable periods in which Valvoline was part of the Ashland consolidated group. In addition, Valvoline has agreed to indemnify Ashland for certain pre-IPO U.S. taxes that arise on audit and are directly attributable to neither the Valvoline business nor Ashland's specialty ingredients and performance materials businesses (collectively, the "Chemicals business").

Valvoline and Ashland as well as their respective subsidiaries were part of U.S. federal consolidated group tax returns and certain combined or similar group tax returns (together, "Combined Tax Returns") through the date of the Distribution. Therefore, Valvoline has joint and several liability with Ashland to the respective taxing authorities for the Combined Tax Returns for the periods up to and including the date of the Distribution.

Pursuant to the Tax Matters Agreement, Valvoline is required to indemnify Ashland for: (a) certain U.S. federal, state or local taxes of Ashland and/or its subsidiaries for any tax period ending on or prior to the (i) Distribution that arise on audit or examination and are directly attributable to Valvoline or (ii) IPO that arise on audit or examination and are directly attributable to neither the Valvoline business nor the Chemicals business; and (b) certain non-U.S. taxes of Ashland and/or its subsidiaries for any tax period ending on or prior to the Distribution that arise on audit or examination and are directly attributable to Valvoline. This indemnification obligation could be material if Ashland receives a material tax assessment for pre-IPO tax periods, several of which are currently under IRS audit.

The Tax Matters Agreement also requires Valvoline to indemnify Ashland for any taxes (and reasonable expenses) resulting from the failure of the Distribution to qualify for non-recognition of gain and loss or certain reorganization transactions related to the separation or the IPO and Distribution to qualify for their intended tax treatment

("Transaction Taxes"), where the taxes result from: (1) breaches of representations or covenants that Valvoline made or agreed to in connection with these transactions, (2) the application of certain provisions of U.S. federal income tax law to the Distribution with respect to acquisitions of Valvoline common stock or (3) any other actions that Valvoline knows or reasonably should expect would give rise to such taxes.

The Tax Matters Agreement also requires Valvoline to indemnify Ashland for a portion of certain other taxes arising from the separation allocated to Valvoline generally based on Valvoline's market capitalization relative to the market capitalization of Ashland at the time of the Distribution.

Valvoline's inability to resolve favorably any disputes that arise between Valvoline and Ashland with respect to their past relationship may adversely affect its operating results.

Disputes may arise between Ashland and Valvoline in a number of areas relating to their past relationship, including labor; tax; employee benefits, including pension liabilities; indemnification; services provided to one another; and other matters arising from Valvoline's separation from Ashland. Valvoline may not be able to resolve disputes with Ashland, and even if it does, the resolution may not be favorable and could adversely affect Valvoline's operating results.

Ashland has agreed to indemnify Valvoline for certain liabilities. However, there can be no assurance that the indemnity will be sufficient to insure Valvoline against the full amount of such liabilities, or that Ashland's ability to satisfy its indemnification obligation will not be impaired in the future.

Pursuant to the terms of the Separation Agreement entered into between Ashland and Valvoline (the "Separation Agreement") and certain other agreements with Ashland, Ashland agreed to indemnify Valvoline for certain liabilities. However, third parties could also seek to hold Valvoline responsible for any of the liabilities that Ashland agreed to retain, and there can be no assurance that the indemnity from Ashland will be sufficient to protect Valvoline against the full amount of such liabilities, or that Ashland will be able to fully satisfy its indemnification obligations in the future. Even if Valvoline ultimately succeeded in recovering from Ashland any amounts for which Valvoline is held liable, Valvoline may be temporarily required to bear these losses. Each of these risks could negatively affect Valvoline's business, financial position, results of operations and cash flows.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Valvoline is headquartered in Lexington, Kentucky, where the Company leases and owns over 230,000 square feet of office, research and development and warehouse space to support operations across its reportable segments. Valvoline owns and leases several additional facilities throughout North America, Europe, Australia, and Asia that comprise nearly 4 million square feet of blending, warehouse, research and development and office space. In addition, Valvoline owns or leases the property associated with 584 company-owned quick-lube service center stores under the Valvoline Instant Oil ChangeSM and Valvoline Great Canadian Oil Change brands throughout the United States and Canada, respectively. The properties leased by Valvoline generally have expiration dates ranging from less than one year to more than 20 years, with certain renewal options available.

In addition, Valvoline contracts with third parties to provide blending, packaging, warehousing and distribution services. Valvoline believes its physical properties are suitable and adequate for the Company's business, and none of the property owned by Valvoline is subject to any major known encumbrances. Additional information regarding lease obligations may be found in Note 3 of the Notes to Consolidated Financial Statements included in Item 8 of Part II of this Annual Report on Form 10-K.

ITEM 3. LEGAL PROCEEDINGS

From time to time, Valvoline is party to lawsuits, claims and other legal proceedings that arise in the ordinary course of business. For a description of Valvoline's legal proceedings, refer to Note 12 of the Notes to Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Market information

Valvoline common stock is listed on the NYSE and trades under the symbol "VVV." Prior to September 23, 2016, the pricing date of the IPO, there was no public market for Valvoline's common stock.

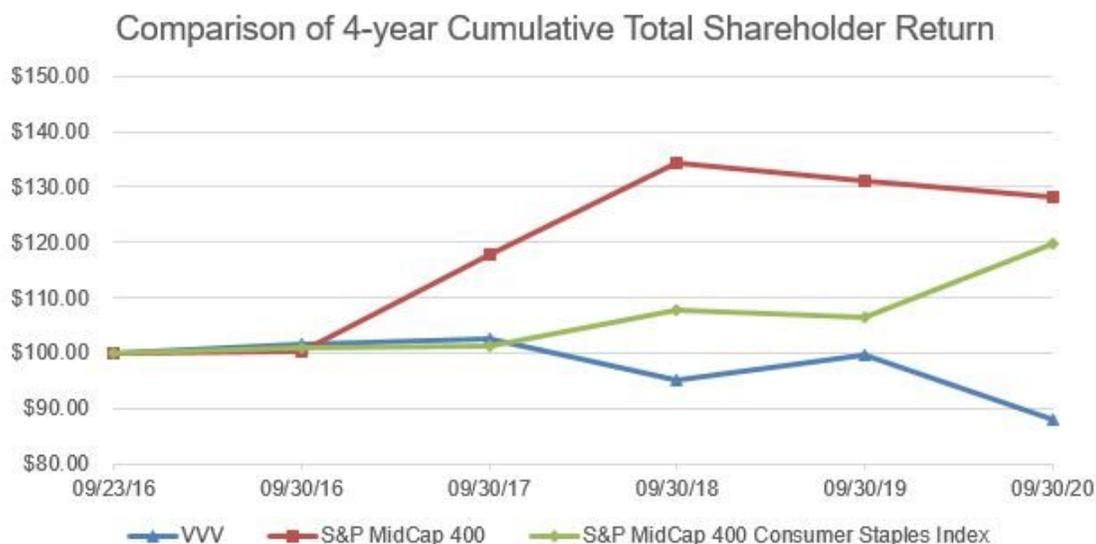
As of November 17, 2020, there were approximately 9,600 registered holders of Valvoline common stock.

Dividend policy

Valvoline expects to continue to pay quarterly cash dividends to the holders of its common stock; however, the declaration and payment of dividends to holders of Valvoline common stock will be at the discretion of Valvoline's Board of Directors (the "Board") in accordance with applicable law after taking into account various factors, including Valvoline's financial condition, operating results, current and anticipated cash needs, cash flows, impact on Valvoline's effective tax rate, indebtedness, legal requirements and other factors that the Board considers relevant. In addition, the instruments governing Valvoline's indebtedness may limit its ability to pay dividends. Therefore, no assurance is given that Valvoline will pay any dividends to its stockholders, or as to the amount of any such dividends if the Board determines to do so.

Stock performance graph

The following graph compares the cumulative total stockholder return on a \$100 investment in Valvoline common stock, the S&P MidCap 400 Index, and the S&P MidCap 400 Consumer Staples Index for the period from September 23, 2016 (the date Valvoline common stock commenced trading) to September 30, 2020. This graph assumes an investment in the Valvoline common stock and each index were \$100 on September 23, 2016 and that all dividends were reinvested.



Comparison of cumulative total returns	9/23/2016	9/30/2016	9/30/2017	9/30/2018	9/30/2019	9/30/2020
Valvoline Inc.	\$ 100.00	\$ 101.69	\$ 102.44	\$ 95.23	\$ 99.66	\$ 88.06
S&P MidCap 400 Index	\$ 100.00	\$ 100.15	\$ 117.70	\$ 134.42	\$ 131.07	\$ 128.24
S&P MidCap 400 Consumer Staples Index	\$ 100.00	\$ 100.91	\$ 101.25	\$ 107.66	\$ 106.56	\$ 119.77

Purchases of Company common stock

The Company did not repurchase any shares of its common stock during the three months ended September 30, 2020 pursuant to the Board authorization on January 31, 2018 to repurchase up to \$300 million of common stock through September 30, 2020. This authorization expired on September 30, 2020.

On November 12, 2020, Valvoline's Board of Directors authorized the repurchase of up to \$100 million of the Company's common stock through September 30, 2021. The timing and amount of any share repurchases will be based on the level of Valvoline's liquidity, general business and market conditions and other factors, including alternative investment opportunities.

ITEM 6. SELECTED FINANCIAL DATA

Valvoline Inc. and Consolidated Subsidiaries Five-Year Selected Financial Information ^(a) ^(b)

(In millions, except per share data)	For the years ended September 30				
	2020	2019	2018	2017	2016
Summary of operations					
Sales	\$ 2,353	\$ 2,390	\$ 2,285	\$ 2,084	\$ 1,929
Gross profit	\$ 863	\$ 810	\$ 806	\$ 776	\$ 748
Operating income	\$ 485	\$ 398	\$ 395	\$ 394	\$ 396
Net income ^(c)	\$ 317	\$ 208	\$ 166	\$ 304	\$ 273
Common stock information					
Basic earnings per share ^(d)	\$ 1.70	\$ 1.10	\$ 0.84	\$ 1.49	\$ 1.60
Diluted earnings per share ^(d)	\$ 1.69	\$ 1.10	\$ 0.84	\$ 1.49	\$ 1.60
Dividends per common share	\$ 0.45	\$ 0.42	\$ 0.30	\$ 0.20	\$ —
Cash flow information					
Cash flows from operating activities	\$ 372	\$ 325	\$ 320	\$ (130)	\$ 311
Less: Additions to property, plant and equipment	(151)	(108)	(93)	(68)	(66)
Plus: Discretionary contributions to pension plans	—	—	—	394	—
Free cash flow ^(e)	\$ 221	\$ 217	\$ 227	\$ 196	\$ 245

(In millions)	As of September 30				
	2020	2019	2018	2017	2016
Balance sheet information					
Total assets	\$ 3,051	\$ 2,064	\$ 1,854	\$ 1,915	\$ 1,825
Long-term debt and finance / capital lease obligations (including current portion)	\$ 2,035	\$ 1,367	\$ 1,342	\$ 1,075	\$ 749
Stockholders' deficit	\$ (76)	\$ (258)	\$ (358)	\$ (117)	\$ (330)

Unaudited (In millions)	For the years ended September 30				
	2020	2019	2018	2017	2016
Other financial and operational data					
Lubricant sales volume (gallons)	168.0	178.4	181.9	179.7	174.5
Company-owned same-store sales growth ^(f)	2.6 %	9.7 %	8.7 %	7.0 %	6.2 %
Franchised same-store sales growth ^(f) ^(g)	2.1 %	10.4 %	8.0 %	7.5 %	8.0 %
Combined same-store sales growth ^(f) ^(g)	2.3 %	10.1 %	8.3 %	7.4 %	7.5 %
EBITDA ^(h)	\$ 610	\$ 399	\$ 449	\$ 574	\$ 468
Adjusted EBITDA ^(h)	\$ 510	\$ 478	\$ 466	\$ 447	\$ 440

(a) At the beginning of fiscal 2020, Valvoline adopted the new lease accounting standard using the optional transitional approach as of October 1, 2019. Refer to Notes 2 and 3 to the Consolidated Financial Statements included in Item 8 of Part II of this Annual Report on Form 10-K for details regarding the impact of adoption.

(b) At the beginning of fiscal 2019, Valvoline adopted the new revenue recognition accounting standard using the modified retrospective method to those contracts that were not completed as of October 1, 2018. Accordingly, the new revenue recognition guidance was applied prospectively from the date of adoption, while prior period financial statements are reported in accordance with the previous guidance. The cumulative effect of the changes at adoption was recognized through an increase to stockholders' deficit of \$13 million, net of tax.

(c) Net income includes the impact of immediately recognizing actuarial gains and losses for defined benefit pension and other postretirement plan remeasurements. Valvoline recognized the following pre-tax remeasurements: a gain of \$22 million in fiscal 2020, a loss of \$69 million in fiscal 2019, a loss of \$38 million in fiscal 2018, a gain of \$68 million in fiscal 2017, and a gain of \$18 million in fiscal 2016. Net income also includes the impact of the enactment of U.S. and Kentucky tax reform legislation, which resulted in an income tax benefit of \$5 million in fiscal 2019 and income tax expense of \$78 million in fiscal 2018.

(d) The weighted average common shares outstanding for the year ended September 30, 2016 are based on the 170 million shares issued to Ashland in the Contribution.

(e) In addition to cash flows from operating activities determined in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"), Valvoline uses free cash flow as a non-GAAP metric of cash flow generation. By deducting capital

expenditures from operating cash flows and adding discretionary contributions to pension plans, the Company is able to provide an indication of the ongoing cash being generated that is ultimately available for both debt and equity holders as well as other investment opportunities. Unlike cash flow from operating activities, free cash flow includes the impact of capital expenditures, providing a supplemental view of cash generation. Free cash flow has certain limitations, including that it does not reflect adjustments for certain non-discretionary cash flows, such as mandatory debt repayments. The amount of mandatory versus discretionary expenditures can vary significantly between periods. Valvoline's results of operations are presented based on its management structure and internal accounting practices. The structure and practices are specific to Valvoline; therefore, its financial results and free cash flow are not necessarily comparable with similar information for other comparable companies. Free cash flow has limitations as an analytical tool and should not be considered in isolation from, or as an alternative to, or more meaningful than, cash flows provided by operating activities as determined in accordance with U.S. GAAP. In evaluating free cash flow, be aware that in the future Valvoline may have expenditures similar to those for which adjustments are made in calculating free cash flow. Valvoline's presentation of free cash flow should not be construed as a basis to infer that its future results will be unaffected by unusual or nonrecurring items. Because of these limitations, one should rely primarily on cash flows provided by operating activities as determined in accordance with U.S. GAAP and use free cash flow only as a supplement.

- (f) Valvoline determines same-store sales growth on a fiscal year basis, with new stores excluded from the metric until the completion of their first full fiscal year in operation. Refer to "Key Business Measures" in Item 7 of Part II of this Annual Report on Form 10-K for a description of management's use and determination of key metrics, including same-store sales.
- (g) Valvoline franchisees are distinct legal entities and Valvoline does not consolidate the results of operations of its franchisees.
- (h) In addition to net income determined in accordance with U.S. GAAP, Valvoline evaluates operating performance using certain non-GAAP measures including Earnings before interest, taxes, depreciation and amortization ("EBITDA"), which management defines as net income/loss, plus income tax expense/benefit, net interest and other financing expenses, and depreciation and amortization; and Adjusted EBITDA, which Valvoline defines as EBITDA adjusted for key items and net pension and other postretirement plan income/expense. Key items consist of income or expenses associated with certain unusual, infrequent or non-operational income or expenses not directly attributable to the underlying business, which management believes impacts the comparability of operational results between periods and are also often related to legacy matters or market-driven events that are not directly related to the underlying business and do not have an immediate, corresponding impact on the Company's ongoing performance. Key items may consist of adjustments related to: the impairment of an equity investment; legacy businesses, including the separation from Ashland and associated impacts of related indemnities; significant acquisitions or divestitures, restructuring-related matters, and other matters that are non-operational or unusual in nature. Net pension and other postretirement plan income/expense includes several elements impacted by changes in plan assets and obligations that are primarily driven by changes in the debt and equity markets, as well as those that are predominantly legacy in nature and related to prior service to the Company from employees (e.g., retirees, former employees, current employees with frozen benefits). These elements include (i) interest cost, (ii) expected return on plan assets, (iii) actuarial gains/losses, and (iv) amortization of prior service cost/credit. Significant factors that can contribute to changes in these elements include changes in discount rates used to remeasure pension and other postretirement obligations on an annual basis or upon a qualifying remeasurement, differences between actual and expected returns on plan assets, and other changes in actuarial assumptions, such as the life expectancy of plan participants. Accordingly, management considers that these elements are more reflective of changes in current conditions in global financial markets (in particular, interest rates) and are outside the operational performance of the business and are also primarily legacy amounts that are not directly related to the underlying business and do not have an immediate, corresponding impact on the compensation and benefits provided to eligible employees for current service. Adjusted EBITDA includes pension and other postretirement service costs related to current employee service as well as the costs of other benefits provided to employees for current service.

Valvoline believes the use of non-GAAP measures assists investors in understanding the ongoing operating performance of its business by presenting comparable financial results between periods. The non-GAAP information provided is used by management and may not be comparable to similar measures disclosed by other companies, because of differing methods used by other companies in calculating EBITDA and Adjusted EBITDA. EBITDA and Adjusted EBITDA provide a supplemental presentation of Valvoline's operating performance.

EBITDA and Adjusted EBITDA each have limitations as analytical tools and should not be considered in isolation from, or as an alternative to, or more meaningful than, net income as determined in accordance with U.S. GAAP. Because of these limitations, one should rely primarily on net income as determined in accordance with U.S. GAAP and use EBITDA and Adjusted EBITDA only as supplements. In evaluating EBITDA and Adjusted EBITDA, one should be aware that in the future Valvoline may experience activity similar to that for which adjustments were made in calculating EBITDA and Adjusted EBITDA. Valvoline's presentation of EBITDA and Adjusted EBITDA should not be construed as a basis to infer that future results will be unaffected by unusual or nonrecurring items.

The following table reconciles net income to EBITDA and Adjusted EBITDA for the periods presented:

(In millions)	For the years ended September 30				
	2020	2019	2018	2017	2016
Net income	\$ 317	\$ 208	\$ 166	\$ 304	\$ 273
Income tax expense	134	57	166	186	148
Net interest and other financing expenses	93	73	63	42	9
Depreciation and amortization ^(a)	66	61	54	42	38
EBITDA	610	399	449	574	468
Net pension and other postretirement plan (income) expenses	(59)	60	—	(138)	(35)
Net legacy and separation-related (income) expenses ^(a)	(30)	3	14	11	6
Compensated absences benefits change ^(a)	(11)	—	—	—	—
Business interruption (recovery) expenses ^(a)	(2)	6	—	—	—
Acquisition and divestiture-related costs (income) ^(b)	2	(4)	3	—	1
Restructuring and related expenses ^(a)	—	14	—	—	—
Adjusted EBITDA	\$ 510	\$ 478	\$ 466	\$ 447	\$ 440

(a) These (income) expense amounts were included in operating income in the respective years ended September 30.

(b) Acquisition and divestiture-related costs (income) were included in operating income in each year presented, other than in fiscal 2016 when reported below operating income.

Business Overview	33
Results of Operations - Consolidated Review	39
Results of Operations - Reportable Segment Review	42
Financial Position, Liquidity and Capital Resources	46
Off-Balance Sheet Arrangements	51
New Accounting Pronouncements	51
Critical Accounting Policies	51

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

The following discussion should be read in conjunction with the consolidated financial statements and the accompanying Notes to Consolidated Financial Statements included in Item 8 of Part II of this Annual Report on Form 10-K.

BUSINESS OVERVIEW

Valvoline is a worldwide marketer and supplier of engine and automotive maintenance products and services. Established in 1866, Valvoline's heritage spans over 150 years, during which it has developed powerful name recognition across multiple product and service channels. In addition to the iconic Valvoline-branded passenger car motor oils and other automotive lubricant products, Valvoline provides a wide array of lubricants used in heavy duty equipment, as well as automotive chemicals and fluids designed to improve engine performance and lifespan. Valvoline's premium branded product offerings enhance its high-quality reputation and provide customers with solutions that address a wide variety of needs.

In the United States and Canada, Valvoline's products and services are sold to retailers with over 55,000 retail outlets, to installer customers with approximately 15,000 locations, and through 1,462 franchised and company-owned stores. Valvoline also has a strong international presence with products sold in more than 140 countries. Valvoline serves its customer base through its sales force and technical support organization, allowing Valvoline to leverage its technology portfolio and customer relationships globally, while meeting customer demands locally. This combination of scale and strong local presence is critical to the Company's success.

Valvoline's fiscal year ends on September 30 of each year and Valvoline has three reportable segments: Quick Lubes, Core North America, and International, with certain corporate and non-operational items included in Unallocated and Other to reconcile to consolidated results. Refer to Item 1 included in Part I of this Annual Report on Form 10-K for a description of Valvoline's reportable segments.

RECENT DEVELOPMENTS

The outbreak of COVID-19 was concentrated in China in late January 2020 and spread quickly, resulting in the World Health Organization declaring a global pandemic on March 11, 2020. COVID-19 has created significant volatility in the global economy and led to reduced economic activity. There have been extraordinary actions taken by international, federal, state, and local public health and governmental authorities to contain and combat the spread of COVID-19 in most regions throughout the world, including restricting non-essential travel, quarantines, "stay-at-home" orders, and similar mandates for many individuals to substantially restrict daily activities and for many businesses to modify or cease normal operations to minimize personal interaction and contact. While certain regions began to relax restrictions beginning in March, a resurgence in cases has led to reinstated limitations across the globe. The duration and extent of restrictions that will remain in place currently remains unclear.

The COVID-19 pandemic led to significant economic disruption which impacted Valvoline's business and results during the fiscal year ended September 30, 2020. Management cannot reasonably quantify the financial impacts on full year results; however, believes that the pandemic resulted in an overall immaterial unfavorable impact to earnings. The most substantial negative effects were estimated to have occurred during the third fiscal quarter of

2020 when restrictions were the most severe and miles driven and volumes significantly declined. The Company also experienced certain benefits in its costs, some of which is believed to have been prolonged due to or as a result of the pandemic and coupled with the recovery in miles driven, which remain behind prior year trends, is estimated to have minimized the severity of the impact on fiscal 2020 results. While the Company cannot predict the duration or the scale of the COVID-19 pandemic or the effect it may continue to have on Valvoline's business, results of operations, or liquidity, it is important to share the impact to-date, how the Company's response is progressing and how Valvoline's results and financial condition could be impacted going forward.

Retail and Manufacturing Operations

As automotive maintenance has generally been deemed essential business during the pandemic, Valvoline has substantially maintained its operations and continued to serve its customers to help engines run and keep vehicles reliably on the road. Valvoline's wholly-owned lubricant blending and packaging plants and Quick Lubes retail service center stores have substantially remained open and operational during the pandemic. Over 98% of Valvoline's system-wide service center stores have remained open during the pandemic to-date. The Company remains committed to operating safely and keeping as many of its stores open as possible for the communities they serve.

Short-term incremental pay and benefit programs, including additional paid sick leave and increased pay rates for hourly and salaried store employees were introduced in Quick Lubes to recognize team members who continued to service customers throughout pandemic. In response to the abrupt decline in miles driven due to COVID-19 restrictions and the resulting significant volume and sales declines in the second half of March and continuing through late April, Valvoline responded quickly by flexing store labor at company-owned retail service center stores and adjusting shifts across its lubricant blending and packaging plants and throughout its distribution networks. In China, construction on the lubricants plant resumed after a temporary suspension and was recently completed.

Remote Work Arrangements

Valvoline took global actions designed to help further prevent the spread of COVID-19, including implementing work-from-home arrangements. Beginning March 18, 2020, employees, other than those in Valvoline's retail service center stores, production and distribution facilities, began working remotely in nearly all locations globally, except China where work-from-home protocols were implemented earlier and substantially ended in March. These remote work arrangements remain in place and have been designed to allow for continued operation of certain business-critical functions, including financial reporting systems and internal control, which have incorporated remote work arrangements using appropriate digital tools.

Valvoline is continually monitoring the global COVID-19 situation and following the White House Guidelines supported by COVID-19 trend data to make decisions regarding the reopening of corporate offices. Valvoline has developed a set of criteria and guidelines that will be used in returning to the office to ensure the safety and well-being of the Company's employees, including social distancing, enhanced cleaning procedures and availability of personal protective equipment. All return-to-office decisions will be made based on the COVID-19 trends in the countries, states and locations where the Company's offices are located.

Liquidity

Valvoline's revenues are primarily generated from the sale and service delivery of engine and automotive maintenance products to its customers. Accordingly, declines in miles driven as a result of a reduction in the ability or willingness to travel due to the COVID-19 pandemic has and is expected to continue to adversely impact Valvoline's volumes and results of operations. Miles driven were significantly lower due to the COVID-19 pandemic, which is estimated to have impacted most of Valvoline's key markets by late March 2020 and continued during most of April 2020, with trends steadily improving throughout the remainder of the fiscal year but still below pre-COVID-19 levels. While management believes Valvoline has sufficient liquidity to meet its operating cash needs, required pension and other postretirement plan contributions, debt servicing obligations, and tax-related and other contractual commitments for the next twelve months, certain precautionary steps were taken as outlined herein to strengthen the Company's cash position in response to the COVID-19 pandemic.

As a precautionary measure to enhance financial flexibility in response to the uncertainty resulting from the COVID-19 pandemic, the Company borrowed under its revolving and trade receivables facilities to increase its cash balance by \$540 million in late March. The Company subsequently paid its revolving facility borrowings in May 2020

with the net proceeds from the offering of \$400 million senior notes due 2025 and cash and cash equivalents on hand. As of September 30, 2020, Valvoline had \$760 million in cash and cash equivalents available for working capital, general corporate purposes, or other purposes permitted under its borrowing facilities. Further, Valvoline temporarily suspended its share repurchase program and took other steps to preserve cash, including limiting or deferring certain non-essential operating expenses and delaying certain capital expenditures, while continuing to invest in high-return, long-term strategic growth initiatives. Since drawing on its credit facilities in March, the Company has maintained its liquidity and generated positive cash flows from operations during the year ended September 30, 2020.

As of September 30, 2020, the Company has access to more than \$1.3 billion in total liquidity, with no meaningful maturities of its outstanding borrowings until 2024.

COVID-19 Relief

On March 27, 2020, the U.S. federal government enacted the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). Among other provisions, the CARES Act includes forms of payroll and income tax relief for corporations. The Company continues to examine the impacts the CARES Act may have on its business and consolidated financial statements and continues to expect modest cash flow benefits in fiscal 2020 and 2021 related to the deferred payment of certain employer payroll-related taxes and accelerated tax deductions. Additionally, other non-U.S. governments are providing various forms of COVID-19 relief, which Valvoline is monitoring and evaluating to determine whether the Company may qualify for additional benefits. The CARES Act and other global COVID-19 relief efforts did not have a material impact on the Company's consolidated financial statements for the year ended September 30, 2020, though modest cash flow and profitability benefits were realized related to the deferred payment of certain employer payroll-related taxes, non-US subsidies received, and expanded tax deductions related to bonus depreciation.

Enhanced Safety Standards

Valvoline's priority remains the health and safety of its employees, customers and business partners. Quick Lubes' drive-through, stay-in-your-car service experience previously produced minimal contact with customers, and the Company took additional actions to modify in-store procedures to further reduce contact between store teams and customers. Procedures in Valvoline's plants, service center stores and offices have also been modified to encourage social distancing and proper handwashing, increase cleaning cycles, adjust labor and shifts, and provide personal protective equipment. Valvoline has taken actions designed to help further prevent the spread of COVID-19, including restricting travel and implementing broad work-from-home protocols, in addition to following government regulations in each of its locations.

Franchisee Support

Valvoline is providing its franchisees with flexibility to respond to the evolving circumstances of the COVID-19 pandemic. Certain franchisees elected to reduce store operating hours or temporarily close some stores in order to better align to local changes in demand. Additionally, other operational changes were made to in-store operating procedures, enhancing the safe operating environment already afforded through Valvoline's stay-in-your-car service experience. Valvoline's franchisees were provided access to detailed information on stimulus-related provisions and federal employee assistance programs that may be utilized to provide financial relief.

Valvoline also provided various types of financial assistance to support the long-term health of its Quick Lubes franchisee network, including low-interest term loans, waiving royalties for one-and-a-half months, and the temporary extension of payment terms to provide increased financial flexibility and enable franchisees to better support their employees and customers as a result of the impact of the COVID-19 pandemic. These actions have not and are not expected to have an impact on Valvoline's ability to meet its cash needs in the ordinary course, or to comply with the covenants under its debt obligations.

COVID-19 Support

Valvoline made contributions to relief and response funds in the U.S. and China and donated personal protective equipment in China, India and the U.S. Valvoline's support also extended to its customers, as orders were supplied and delivered with the same on-time metrics through no-contact deliveries, and in some cases, extended payment terms were permitted. Valvoline provided benefits to its employees to cover the cost of COVID-19 testing, promoted

its telehealth benefits, amended its 401(k) savings plan to enhance hardship loan eligibility and payment terms, and provided additional paid sick leave for quarantined employees.

FISCAL 2020 OVERVIEW

The following were the significant events for fiscal 2020, each of which is discussed more fully in this Annual Report on Form 10-K:

- The durability of the Valvoline business model was reflected in the Company's rapid improvement from the significant headwinds during depths of the COVID-19 pandemic, leading to strong year-over-year growth in profitability. For the full year, net income increased \$109 million to \$317 million, while diluted earnings per share of \$1.69 increased \$0.59 versus the prior year.
- Quick Lubes sales grew 7% to \$883 million in fiscal 2020 with system-wide same-store sales growth of 2.3% year-over-year, the 14th consecutive year of same-store sales growth. System-wide same-store sales in the fourth fiscal quarter grew 8.3%, returning to pre-COVID-19 growth rates. This growth was driven by average ticket and transaction growth attributable to favorable premium mix, increased revenue from non-oil change services, new customer acquisition and strong in-store execution of the Company's safety-focused, stay-in-your-car service model. The Quick Lubes system added 77 net new stores in fiscal 2020, including 36 newly-built company-owned service center stores.
- Core North America operating income increased by 33% from the prior year and was driven by favorable channel and product mix, lower raw material costs and benefits from the cost savings program that began in fiscal 2019. Improved unit margins combined with expense reductions implemented during the early stages of the COVID-19 pandemic offset lower volume from the installer customer channel.
- International sales and volume decreased due to impacts from COVID-19 across all regions, particularly in Latin America. Volume in unconsolidated joint ventures also declined due to pandemic impacts, particularly in India, which was partially offset by growth in the China joint venture.
- The Company completed two issuances of senior unsecured notes during the year ended September 30, 2020 with \$600 million issued in February 2020 and \$400 million issued in May 2020. Net proceeds from the two issuances, as well as cash and cash equivalents, were used to redeem \$375 million of senior unsecured notes due in 2024 and pay an early redemption premium of \$15 million, to prepay \$100 million of its term loan, and repay \$450 million under its senior secured revolving credit facility.
- During fiscal 2020, Valvoline returned \$144 million of capital to shareholders through dividends and share repurchases.

Results for Fiscal 2019 compared to Fiscal 2018

For comparisons of Valvoline's consolidated and segment results of operations and consolidated cash flows for the fiscal years ended September 30, 2019 to September 30, 2018, refer Item 7 of Part II of the Annual Report on Form 10-K for the fiscal year ended September 30, 2019, filed with the SEC on November 22, 2019.

Use of Non-GAAP Measures

To aid in the understanding of Valvoline's ongoing business performance, certain items within this document are presented on an adjusted, non-GAAP basis. These non-GAAP measures are not defined within U.S. GAAP and do not purport to be alternatives to net income/loss or cash flows from operating activities as measures of operating performance or cash flows. The following are the non-GAAP measures management has included and how management defines them:

- EBITDA, which management defines as net income/loss, plus income tax expense/benefit, net interest and other financing expenses, and depreciation and amortization;
- Adjusted EBITDA, which management defines as EBITDA adjusted for key items, as further described below, and net pension and other postretirement plan expense/income; and

- Free cash flow, which management defines as operating cash flows less capital expenditures and certain other adjustments as applicable.

These measures are not prepared in accordance with U.S. GAAP and management believes the use of non-GAAP measures assists investors in understanding the ongoing operating performance of Valvoline's business by presenting comparable financial results between periods. The non-GAAP information provided is used by Valvoline's management and may not be comparable to similar measures disclosed by other companies, because of differing methods used by other companies in calculating EBITDA, Adjusted EBITDA and free cash flow. EBITDA, Adjusted EBITDA, and free cash flow provide a supplemental presentation of Valvoline's operating performance. For a reconciliation of non-GAAP measures, refer to the "Results of Operations" and "Financial Position, Liquidity and Capital Resources" sections below.

Due to depreciable assets associated with the nature of the Company's operations and interest costs related to Valvoline's capital structure, management believes EBITDA is an important supplemental measure to evaluate the Company's operating results between periods on a comparable basis.

Management also believes Adjusted EBITDA provides investors with a meaningful supplemental presentation of Valvoline's operating performance. Adjusted EBITDA excludes the impact of the following:

- Key items - Key items consist of income or expenses associated with certain unusual, infrequent or non-operational income or expenses not directly attributable to the underlying business, which management believes impacts the comparability of operational results between periods. Key items may consist of adjustments related to: the impairment of an equity investment; legacy businesses, including the separation from Ashland and associated impacts of related indemnities; significant acquisitions or divestitures; restructuring-related matters; and other matters that are non-operational or unusual in nature. Key items are considered by management to be outside the comparable operational performance of the business and are also often related to legacy matters or market-driven events that are not directly related to the underlying business and do not have an immediate, corresponding impact on the Company's ongoing performance. Details with respect to the composition of key items recognized during the respective periods presented herein are set forth below in the "EBITDA and Adjusted EBITDA" section of "Results of Operations" that follows.
- Net pension and other postretirement plan expense/income - Net pension and other postretirement plan expense/income includes several elements impacted by changes in plan assets and obligations that are primarily driven by changes in the debt and equity markets, as well as those that are predominantly legacy in nature and related to prior service to the Company from employees (e.g., retirees, former employees, current employees with frozen benefits). These elements include (i) interest cost, (ii) expected return on plan assets, (iii) actuarial gains/losses, and (iv) amortization of prior service cost/credit. Significant factors that can contribute to changes in these elements include changes in discount rates used to remeasure pension and other postretirement obligations on an annual basis or upon a qualifying remeasurement, differences between actual and expected returns on plan assets, and other changes in actuarial assumptions, such as the life expectancy of plan participants. Accordingly, management considers that these elements are more reflective of changes in current conditions in global financial markets (in particular, interest rates) and are outside the operational performance of the business and are also primarily legacy amounts that are not directly related to the underlying business and do not have an immediate, corresponding impact on the compensation and benefits provided to eligible employees for current service. Adjusted EBITDA will continue to include pension and other postretirement service costs related to current employee service as well as the costs of other benefits provided to employees for current service.

Management uses free cash flow as an additional non-GAAP metric of cash flow generation. By including capital expenditures and certain other adjustments, as applicable, management is able to provide an indication of the ongoing cash being generated that is ultimately available for both debt and equity holders as well as other investment opportunities. Unlike cash flow from operating activities, free cash flow includes the impact of capital expenditures, providing a supplemental view of cash generation. Free cash flow has certain limitations, including that it does not reflect adjustments for certain non-discretionary cash flows, such as mandatory debt repayments. The amount of mandatory versus discretionary expenditures can vary significantly between periods.

Valvoline's results of operations are presented based on Valvoline's management structure and internal accounting practices. The structure and practices are specific to Valvoline; therefore, Valvoline's financial results, EBITDA,

Adjusted EBITDA and free cash flow are not necessarily comparable with similar information for other comparable companies. EBITDA, Adjusted EBITDA and free cash flow each have limitations as analytical tools and should not be considered in isolation from, or as an alternative to, or more meaningful than, net income and cash flows from operating activities as determined in accordance with U.S. GAAP. Because of these limitations, net income and cash flows from operating activities should primarily be relied upon as determined in accordance with U.S. GAAP, and EBITDA, Adjusted EBITDA, and free cash flow should only be used as supplements. In evaluating EBITDA, Adjusted EBITDA, and free cash flow, one should be aware that in the future Valvoline may incur expenses/income similar to those for which adjustments are made in calculating EBITDA, Adjusted EBITDA, and free cash flow. Valvoline's presentation of EBITDA, Adjusted EBITDA, and free cash flow should not be construed as a basis to infer that Valvoline's future results will be unaffected by unusual or nonrecurring items.

Key Business Measures

Valvoline tracks its operating performance and manages its business using certain key measures, including system-wide, company-owned and franchised store counts and same-store sales; lubricant volumes sold by unconsolidated joint ventures; and total lubricant volumes sold and percentage of premium lubricants sold. Management believes these measures are useful to evaluating and understanding Valvoline's operating performance and should be considered as supplements to, not substitutes for, Valvoline's sales and operating income, as determined in accordance with U.S. GAAP.

Sales in the Quick Lubes reportable segment are influenced by the number of service center stores and the business performance of those stores. Stores are considered open upon acquisition or opening for business. Temporary store closings remain in the respective store counts with only permanent store closures reflected in the end of period store counts and activity. Same-store-sales ("SSS") is defined as sales by U.S. Quick Lubes service center stores (company-owned, franchised and the combination of these for system-wide SSS), with new stores excluded from the metric until the completion of their first full fiscal year in operation as this period is generally required for new store sales levels to begin to normalize. Differences in SSS are calculated to determine the percentage change between comparative periods. Quick Lubes revenue is limited to sales at company-owned stores, sales of lubricants and other products to independent franchisees and Express Care operators, and royalties and other fees from franchised stores. Although Valvoline does not recognize store-level sales from franchised stores as revenue in its Consolidated Statements of Comprehensive Income, management believes system-wide and franchised SSS comparisons and store counts are useful to assess the operating performance of the Quick Lube reportable segment and the operating performance of an average Quick Lubes store.

Lubricant volumes sold by unconsolidated joint ventures are used to measure the operating performance of the International operating segment. Valvoline does not record lubricant sales from unconsolidated joint ventures as International reportable segment revenue. International revenue is limited to sales by Valvoline's consolidated affiliates. Although Valvoline does not record sales by unconsolidated joint ventures as revenue in its Consolidated Statements of Comprehensive Income, management believes lubricant volumes including and sold by unconsolidated joint ventures is useful to assess the operating performance of its investments in joint ventures.

Management also evaluates lubricant volumes sold in gallons by each of its reportable segments and premium lubricant percentage, defined as premium lubricant gallons sold as a percentage of U.S. branded lubricant volumes for the Quick Lubes and Core North America segments and as a percentage of total segment lubricant volume for the International segment. Premium lubricant products generally provide a higher contribution to segment profitability and the percentage of premium volumes is useful to evaluating and understanding Valvoline's operating performance.

RESULTS OF OPERATIONS

Consolidated review

The following table summarizes the results of the Company's operations for the years ended September 30:

(In millions)	2020		2019		Variance	
	Amount	% of Sales	Amount	% of Sales	Amount	% Change
Sales	\$ 2,353	100.0 %	\$ 2,390	100.0 %	\$ (37)	(1.5) %
Gross profit	\$ 863	36.7 %	\$ 810	33.9 %	\$ 53	6.5 %
Net operating expenses	\$ 378	16.1 %	\$ 412	17.2 %	\$ (34)	(8.3) %
Operating income	\$ 485	20.6 %	\$ 398	16.7 %	\$ 87	21.9 %
Net income	\$ 317	13.5 %	\$ 208	8.7 %	\$ 109	52.4 %

Sales

The following table provides a reconciliation of the changes in sales from fiscal 2019 to 2020:

(In millions)	2020 Change
Mix and price	\$ 66
Volume	(104)
Currency exchange	(11)
Acquisitions	12
Change in sales	\$ (37)

Total sales were down 2% year-over-year and lubricant volumes decreased 6% from the prior year, primarily driven by the significant impacts of COVID-19 restrictions, particularly in the third quarter. Declines in Core North America and International were partially offset by increases in Quick Lubes with unit growth and full year system-wide same-store sales increases of 2.3%. The decline in Core North America volumes from COVID-19 was partially offset by improved channel and product mix, while International volumes were down across most regions due to COVID-19 impacts. The changes to reportable segment sales and the drivers thereof are discussed in further detail in "Reportable Segment Review" below.

Gross profit

The following table provides a reconciliation of the changes in gross profit from fiscal 2019 to 2020:

(In millions)	2020 Change
Volume and mix	\$ (14)
Price and cost	69
Currency exchange	(3)
Acquisitions	1
Change in gross profit	\$ 53

Despite lower volumes, gross profit increased compared to the prior year driven by the benefit of mix improvements in Quick Lubes and Core North America, and lower costs, which included a favorable raw material cost environment, benefits from the cost savings program that began in fiscal 2019, and the favorable impact from the resumed operations at the Company's second largest domestic blending facility that was temporarily shut down in the prior year due to a nearby third-party fire.

The increase in gross profit margin of 2.8% compared to the prior year period was driven by a more favorable cost structure primarily as a result of the cost savings program and benefits from the raw material and cost environment.

The changes to reportable segment gross profit and the drivers thereof are discussed in further detail in “Reportable Segment Review” below.

Net operating expenses

The table below provides details of the components of net operating expenses during the years ended September 30:

(In millions)	2020		2019		Variance	
	Amount	% of Sales	Amount	% of Sales	Amount	% Change
Selling, general and administrative expenses	\$ 442	18.8 %	\$ 449	18.8 %	\$ (7)	(1.6)%
Net legacy and separation-related (income) expenses	(30)	(1.3)%	3	0.1 %	(33)	(1,100.0)%
Equity and other income, net	(34)	(1.4)%	(40)	(1.7)%	6	(15.0)%
Net operating expenses	\$ 378	16.1 %	\$ 412	17.2 %	\$ (34)	(8.3)%

The decrease in selling, general and administrative expenses was primarily due to the benefits recognized related to the compensated absences benefits change rolled out during the fourth fiscal quarter of 2020. Lower costs in fiscal 2020 related to the substantial completion of restructuring activities associated with the cost savings program commenced in the prior year and lower expenses due to controlled spending, which included reduced travel expenses resulting from the impacts of the COVID-19 pandemic, were largely offset by higher incentive compensation-related costs due to improved Company performance and an increase in rent expense due to the reclassification of a build-to-suit arrangement in adoption of the lease accounting standard.

The decrease in net legacy and separation-related expenses was driven by the reduction of the estimated indemnity obligation under the Tax Matters Agreement related to management’s determination that it is no longer more likely than not to realize certain legacy tax attributes which were transferred from Ashland as a result of the Contribution. This benefit was offset by a valuation allowance recorded in income tax expense for no net impact to earnings in the fiscal year ended September 30, 2020.

The decrease in equity and other income, net was primarily driven by other income recognized during the prior year related to the bargain purchase gain in connection with the acquisition of an Eastern European lubricant production company, incentives for operating in a free trade zone outside the U.S., and fees associated with the termination of certain contracts, in addition to lower profit contributions from unconsolidated joint ventures as a result of the COVID-19 pandemic. These decreases were partially offset by a business interruption recovery received in the fourth fiscal quarter of 2020.

Net pension and other postretirement plan expense

Net pension and other postretirement plan expense decreased \$119 million from the prior year primarily due to a gain on pension and other postretirement plan remeasurement of \$22 million compared to a loss of \$69 million in fiscal 2019. This change was primarily attributed to higher than expected returns on plan assets and favorable changes in mortality assumptions, which were partially offset by decreases in discount rates.

Net interest and other financing expenses

Net interest and other financing expense increased \$20 million during fiscal 2020 compared to 2019. The increase was primarily due to the loss on extinguishment in connection with the redemption of the 2024 Notes in March 2020.

Income tax expense

The following summarizes income tax expense and the effective tax rate during the years ended September 30:

(In millions)	2020	2019
Income tax expense	\$ 134	\$ 57
Effective tax rate percentage	29.7 %	21.5 %

Higher income tax expense in fiscal 2020 from the prior year was principally driven by higher pre-tax earnings and income tax expense recognized during the year to establish a \$30 million valuation allowance on certain legacy tax attributes. This increase in expense coupled with prior year benefits from the release of a valuation allowance and the clarification of certain provisions of Kentucky tax reform legislation led to a higher effective tax rate in fiscal 2020.

EBITDA and Adjusted EBITDA

The following table reconciles net income to EBITDA and Adjusted EBITDA for the years ended September 30:

(In millions)	2020	2019
Net income	\$ 317	\$ 208
Income tax expense	134	57
Net interest and other financing expenses	93	73
Depreciation and amortization	66	61
EBITDA	610	399
Net pension and other postretirement plan (income) expenses	(59)	60
Net legacy and separation-related (income) expenses	(30)	3
Compensated absences benefits change	(11)	—
Business interruption (recovery) expenses	(2)	6
Acquisition and divestiture-related costs (income)	2	(4)
Restructuring and related expenses	—	14
Adjusted EBITDA ^(a)	\$ 510	\$ 478

(a) Net pension and other postretirement plan income includes remeasurement gains and losses and recurring non-service pension and other postretirement net periodic income, which consists of interest cost, expected return on plan assets and amortization of prior service credit. Refer to Note 11 of the Notes to Consolidated Financial Statements included in Item 8 of Part II of this Annual Report on Form 10-K for further details.

The increase in Adjusted EBITDA of \$32 million in fiscal 2020 was driven by the performance of Core North America, which included product and channel mix benefits and favorable costs, inclusive of lower raw material costs and benefits from the costs savings initiative program, which more than offset lower volumes attributed to the COVID-19 pandemic and increased incentive compensation-related costs.

Reportable Segment Review

Valvoline's business is managed within the following three reportable segments:

- **Quick Lubes** - services the passenger car and light truck quick lube market through company-owned and independent franchised retail quick lube service center stores and independent Express Care stores that service vehicles with Valvoline products, as well as through investment in a joint venture in China to pilot expansion of retail quick lube service center stores outside of North America.
- **Core North America** - sells engine and automotive maintenance products in the United States and Canada to retailers, installers, and heavy-duty customers to service vehicles and equipment.
- **International** - sells engine and automotive products in more than 140 countries outside of the United States and Canada for the maintenance of consumer and commercial vehicles and equipment.

Valvoline's reportable segments are measured for profitability based on operating income; therefore, Valvoline does not generally allocate items to each reportable segment below operating income, such as net pension and other postretirement plan expense, net interest and other financing expenses or income tax expense. Operating income by segment includes the allocation of shared corporate costs, which are allocated consistently based on each segment's proportional contribution to various financial measures. Valvoline does not allocate certain significant corporate and non-operational matters, including, but not limited to, company-wide restructuring activities and costs or adjustments that relate to former businesses that Valvoline no longer operates. These matters are attributed to Unallocated and other. Results of Valvoline's reportable segments are presented based on how operations are managed internally, including how the results are reviewed by the chief operating decision maker. The structure and practices are specific to Valvoline; therefore, the financial results of its reportable segments are not necessarily comparable with similar information for other comparable companies.

Quick Lubes

Management believes the number of company-owned and franchised service center stores as provided in the following tables is useful to assess the operating performance of the Quick Lubes reporting segment.

	Company-owned	
	For the years ended September 30	
	2020	2019
Beginning of period	519	462
Opened	36	28
Acquired	12	24
Conversions between company-owned and franchised	17	5
Closed	—	—
End of period	584	519
	Franchised ^(a)	
	For the years ended September 30	
	2020	2019
Beginning of period	866	780
Opened	36	65
Acquired	—	31
Conversions between company-owned and franchised	(17)	(5)
Closed	(7)	(5)
End of period ^(b)	878	866
Total stores	1,462	1,385

(a) Valvoline's franchisees are distinct legal entities and Valvoline does not consolidate the results of operations of its franchisees.

(b) Included in the store counts at September 30, 2020 was one franchised service center store temporarily closed at the discretion of the independent operator due to the impacts of COVID-19.

The Quick Lubes system added 77 net new company-owned and franchised stores in fiscal 2020. Company-owned store growth was comprised of 36 newly constructed stores and 29 acquired stores and franchised stores added 12 net new stores.

The following table summarizes the results of the Quick Lubes reportable segment for the years ended September 30:

(In millions)	2020		2019	
Sales	\$	883	\$	822
Operating income	\$	169	\$	178
Depreciation and amortization	\$	43	\$	36
Gross profit as a percent of sales ^(a)		37.9 %		39.1 %
Operating income as a percent of sales		19.1 %		21.7 %
Operating information				
Lubricant sales gallons		28.9		28.1
Premium lubricants (percent of U.S. branded volumes)		67.6 %		65.0 %
Same-store sales growth ^(b) - Company-owned		2.6 %		9.7 %
Same-store sales growth ^(b) - Franchised ^(c)		2.1 %		10.4 %
Same-store sales growth ^(b) - Combined ^(c)		2.3 %		10.1 %

(a) Gross profit as a percent of sales is defined as sales, less cost of sales, divided by sales.

(b) Valvoline determines same-store sales growth on a fiscal year basis, with new stores excluded from the metric until the completion of their first full fiscal year in operation.

(c) Valvoline's franchisees are distinct legal entities and Valvoline does not consolidate the results of operations of its franchisees.

Quick Lubes sales increased \$61 million, or 7%, during fiscal 2020. Same-store sales grew 2.3% system-wide driven by favorable pricing, premium mix improvements and increased revenue from non-oil change services, which combined to improve average ticket and increase sales. Unit growth of 6% across the Quick Lubes system also contributed to the increase in sales. Volumes were impacted by a decline in miles driven as shelter-in-place directives implemented across North America limited travel in response to the COVID-19 pandemic. Substantially all service center stores remained open, with fewer transactions adversely impacting sales.

Gross profit margin decreased 1.2% during fiscal 2020 compared to fiscal 2019. Gross profit margin was negatively impacted by a temporary increase in labor costs earlier in the fiscal year, as well as higher costs associated with the ramp up phase of newly built company stores within their first year of operation.

Operating income decreased \$9 million, or 5%, during fiscal 2020. Lower transactions resulting from the COVID-19 pandemic combined with increased costs, including labor and the allocation of shared corporate costs, drove lower operating income.

Core North America

The following table summarizes the results of the Core North America reportable segment for the years ended September 30:

(In millions)	2020		2019	
Sales	\$	945	\$	994
Operating income	\$	202	\$	152
Depreciation and amortization	\$	16	\$	18
Gross profit as a percent of sales ^(a)		38.9 %		33.0 %
Operating income as a percent of sales		21.4 %		15.3 %
Operating information				
Lubricant sales gallons		84.4		92.1
Premium lubricants (percent of U.S. branded volumes)		58.0 %		52.6 %

(a) Gross profit as a percent of sales is defined as sales, less cost of sales, divided by sales.

Core North America sales decreased \$49 million, or 5%, during fiscal 2020 primarily related to reduced volumes due to the COVID-19 pandemic, particularly in the installer channel where recovery was slower due to the decline in miles driven. These declines were partially offset by improved channel and product mix in addition to favorable adjustments to trade and promotion cost estimates.

Gross profit margin increased 5.9% during fiscal 2020 compared to fiscal 2019. The primary drivers for increased gross profit margin were favorable channel and product mix and price-cost lag, in addition to benefits from the operating expense reduction program launched last fiscal year.

Operating income increased \$50 million, or 33%, during fiscal 2020, which benefited from margin improvement and reduced expenses. This increase was largely driven by favorable product and channel mix in addition to cost structure benefits driven by lower raw material costs and the operating expense reduction program. Improved margins combined with the expense reductions implemented during the early stages of the COVID-19 pandemic offset the impact of lower installer channel volume.

International

The following tables summarizes the results of the International reportable segment for the years ended September 30:

(In millions)	2020		2019	
Sales	\$	525	\$	574
Operating income	\$	73	\$	85
Depreciation and amortization	\$	7	\$	7
Gross profit as a percent of sales ^(a)		29.7 %		28.1 %
Operating income as a percent of sales		13.9 %		14.8 %
Operating information				
Lubricant sales gallons ^(b)		54.7		58.2
Lubricant sales gallons, including unconsolidated joint ventures ^(c)		91.7		99.0
Premium lubricants (percent of lubricant volume)		25.9 %		28.2 %

(a) Gross profit as a percent of sales is defined as sales, less cost of sales, divided by sales.

(b) Excludes volumes from unconsolidated subsidiaries.

(c) Valvoline's unconsolidated joint ventures are distinct legal entities and Valvoline does not consolidate the result of operations of its unconsolidated joint ventures.

International sales decreased \$49 million, or 9%, in fiscal 2020. The decline in sales was largely attributable to lower volumes and unfavorable currency exchange that more than offset the benefits from the Eastern European acquisition completed in late fiscal 2019. The majority of the volume decline occurred in Latin America where recovery is lagging due to extended COVID-19 impacts. Partially offsetting this decline was solid volume growth in the Asia-Pacific region, notably China and Australia, during the fourth quarter of 2020.

Gross profit margin increased 1.6% during fiscal 2020 compared to fiscal 2019, which was primarily driven by favorable geographic mix and the benefits from a more stable and favorable raw material cost environment, including the impact from resumed operations at the Company's second largest domestic blending facility that was temporarily shut down in the prior year due to a nearby third-party fire.

Operating income decreased \$12 million during fiscal 2020, primarily due to lower volumes attributed to the COVID-19 pandemic, as well as other income recognized during the prior year related to a bargain purchase gain resulting from an acquisition and incentives received for operating in a free trade zone outside the U.S. These declines were partially offset by overall gross margin improvements.

FINANCIAL POSITION, LIQUIDITY AND CAPITAL RESOURCES

Overview

The Company closely manages its liquidity and capital resources. Valvoline's liquidity requirements depend on key variables, including the level of investment needed to support business strategies, the performance of the business, capital expenditures, borrowing arrangements, and working capital management. Capital expenditures, acquisitions, share repurchases, and dividend payments are components of the Company's cash flow and capital management strategy, which to a large extent, can be adjusted in response to economic and other changes in the business environment. The Company has a disciplined approach to capital allocation, which focuses on investing in key priorities that support Valvoline's business and growth strategies and returning capital to shareholders, while funding ongoing operations.

As of September 30, 2020, the Company had \$760 million in cash and cash equivalents, of which approximately \$122 million was held by Valvoline's non-U.S. subsidiaries. The Company has various means to deploy cash with low tax consequences in the locations where it is needed due to U.S. tax reform legislation enacted in fiscal 2018.

Cash flows

Valvoline's cash flows as reflected in the Consolidated Statements of Cash Flows are summarized as follows for the years ended September 30:

(In millions)	2020	2019
Cash provided by (used in):		
Operating activities	\$ 372	\$ 325
Investing activities	(222)	(188)
Financing activities	450	(71)
Effect of currency exchange rate changes on cash, cash equivalents, and restricted cash	2	(3)
Increase in cash, cash equivalents, and restricted cash	\$ 602	\$ 63

Operating activities

The increase in cash flows provided by operating activities during fiscal 2020 compared to 2019 was primarily due to higher cash earnings which was partially offset by an increase in cash paid for income taxes of \$19 million.

Investing activities

The increase in cash flows used in investing activities for fiscal 2020 compared to 2019 was primarily due to increases in capital expenditures of \$43 million related to investments in new stores and the blending and packaging plant in China, and the COVID-19 relief loans extended to franchisees of approximately \$30 million, partially offset by lower cash consideration paid for acquisitions of \$38 million.

Financing activities

The increase in cash flows from financing activities for fiscal 2020 compared to 2019 was primarily driven by the issuance of the 2030 Notes and borrowings under the Trade Receivables Facility in response to the COVID-19 pandemic to provide enhanced financial flexibility. In addition, share repurchases and transaction costs associated with borrowing activities in fiscal 2020 led to higher cash outflows.

Free cash flow and other liquidity information

The following table sets forth free cash flow for the disclosed periods and reconciles cash flows from operating activities to free cash flow. As previously noted, free cash flow has certain limitations, including that it does not reflect adjustments for certain non-discretionary cash flows, such as mandatory debt repayments. Refer to "Use of Non-GAAP Measures" within this Item 7 for additional information regarding this non-GAAP measure.

(In millions)	For the years ended September 30	
	2020	2019
Cash flows provided by operating activities	\$ 372	\$ 325
Additions to property, plant and equipment	(151)	(108)
Free cash flow	\$ 221	\$ 217

At September 30, 2020, working capital (current assets minus current liabilities, excluding long-term debt due within one year) was \$994 million compared to \$389 million in 2019. Liquid assets (cash, cash equivalents, and accounts receivable) were 269% of current liabilities as of September 30, 2020 and 132% as of September 30, 2019. The increase in working capital is primarily related to increases in cash primarily due to increased borrowing activity taken as a precautionary measure by the Company to preserve liquidity in response to the COVID-19 pandemic.

Debt

The following table summarizes Valvoline's debt as of September 30:

(In millions)	2020	2019
2030 Notes ^(a)	\$ 600	\$ —
2025 Notes ^(b)	800	400
2024 Notes ^(a)	—	375
Term Loan ^(a)	475	575
Trade Receivables Facility ^(c)	88	—
China Credit Facility ^(d)	18	—
Other ^(e)	—	1
Total debt	<u>\$ 1,981</u>	<u>\$ 1,351</u>

- (a) Issued 4.250% senior notes in February 2020 with the net proceeds used to redeem the 2024 Notes, repay \$100 million on the Term Loan, and the remainder preserved to maintain liquidity and expected to be used for general corporate purposes, including acquisitions, repayment of indebtedness, working capital needs, and capital expenditures.
- (b) Comprised of two issuances of 4.375% \$400 million senior notes, one issued in August 2017, and the other in May 2020 when the net proceeds, together with cash and cash equivalents on hand, were utilized to repay \$450 million in borrowings from the revolving credit facility under the Senior Credit Agreement, which had a remaining borrowing capacity of \$469 million as of September 30, 2020. These borrowings were a precautionary measure to further strengthen the Company's liquidity position and provide financial flexibility in response to the COVID-19 pandemic.
- (c) Amendments in fiscal 2020 to extend maturity to November 2021 and modify the eligibility requirements for certain receivables, which increased the remaining eligible borrowing capacity. During fiscal 2020, Valvoline borrowed \$90 million to proactively increase its cash position and enhance financial agility in light of the uncertainty resulting from the COVID-19 pandemic. As of September 30, 2020, the remaining borrowing capacity was \$79 million based on the availability of eligible receivables.
- (d) Five-year credit agreement entered into in May 2020 for approximately \$40 million to finance the completion of construction of the blending and packaging plant in China. The proceeds are restricted for capital expenditures directly related to the construction of the plant. As of September 30, 2020, the China Credit Facility had remaining borrowing capacity of approximately \$22 million.
- (e) Other includes debt acquired through acquisitions.

As of September 30, 2020, Valvoline was in compliance with all covenants of its debt obligations. Following the interest rate swap agreements Valvoline entered into during fiscal 2020, approximately 88% of its outstanding borrowings as of September 30, 2020 had fixed rates, with the remainder bearing variable interest rates. Refer to Note 9 of the Notes to Consolidated Financial Statements included in Item 8 of Part II of this Annual Report on Form 10-K for additional details regarding the Company's debt instruments.

On November 16, 2020, the Company entered into a one-year revolving credit facility of approximately \$23 million to finance the working capital needs of the blending and packaging plant in China, as needed. Borrowings will bear interest at the local prime rate less the applicable interest rate margin with interest due monthly and repayment of borrowings due at maturity.

Guarantor financial information

Valvoline has outstanding fixed rate senior notes as of September 30, 2020, which consist of 4.375% senior unsecured notes due 2025 with an aggregate principal amount of \$800 million (the "2025 Notes"). The 2025 Notes are comprised of two issuances from Valvoline Inc., as the parent company, of 4.375% senior unsecured notes due 2025 each with an aggregate principal amount of \$400 million, one issuance that was completed in August 2017 (the "Existing 2025 Notes") and the other that was completed in May 2020 (the "Additional 2025 Notes"). The 2025 Notes were registered in exchange offers in which no additional proceeds were received. The exchange offer for the Existing 2025 Notes was completed in December 2017, and the exchange offer for the Additional 2025 Notes was completed in August 2020. The 2025 Notes remain subject to Rule 3-10 of SEC Regulation S-X.

The 2025 Notes are guaranteed on a senior unsecured basis, jointly and severally, by certain wholly-owned subsidiaries of the Company (the "Guarantor Subsidiaries"). Refer to Exhibit 22 for a summary of the Company's Guarantor Subsidiaries. Other subsidiaries (the "Non-guarantor Subsidiaries") largely represent the international operations of the Company, which do not guarantee the 2025 Notes. Under the terms of the indentures, governing the 2025 Notes, Valvoline Inc. and the Guarantor Subsidiaries (the "Obligor Group") each fully and unconditionally, jointly and severally, guarantee the payment of interest, principal and premium, if any, on the 2025 Notes. Refer to

Note 9 of the Notes to Consolidated Financial Statements included in Item 8 of Part II of this Annual Report on Form 10-K for additional information regarding the 2025 Notes.

The Guarantor Subsidiaries are subject to release in certain circumstances, including (i) the sale of all of the capital stock of the subsidiary, (ii) the designation of the subsidiary as an "Unrestricted Subsidiary" under the indenture governing the 2025 Notes, or (iii) the release of the subsidiary as a guarantor from the Company's Senior Credit Agreement described further in Note 9.

In March 2020, the SEC adopted final rules that amend the financial disclosure requirements for subsidiary issuers and guaranties of registered debt securities under Rule 3-10 of Regulation S-X, permitting registrants to disclose summarized financial information for each subsidiary issuer and guarantor. These final rules were codified in Rule 13-01 of Regulation S-X and Valvoline has early adopted this guidance. In compliance thereof, the Company is including summarized financial information for the Obligor Group on a combined basis after transactions and balances within the combined entities have been eliminated.

The following table presents the summarized statement of comprehensive income for the period ended September 30, 2020:

(In millions)	Obligor Group
Revenue	\$ 1,834
Intercompany revenue with non-obligor subsidiaries, net	\$ 37
Gross profit	\$ 710
Operating income	\$ 441
Net income attributable to group	\$ 281

The following table presents the summarized balance sheet for the period ended September 30, 2020:

(In millions)	Obligor Group
Assets	
Current assets	\$ 863
Intercompany receivable	\$ 42
Noncurrent assets	\$ 1,365
Liabilities	
Current liabilities	\$ 334
Noncurrent liabilities	\$ 2,534

Contractual obligations and other commitments

The following table sets forth Valvoline's obligations and commitments to make future payments under existing contracts at September 30, 2020. Excluded from the table are contractual obligations for which the ultimate settlement of quantities or prices are not fixed and determinable.

(In millions)	Total	Less than 1 Year	1-3 years	3-5 years	More than 5 years
Contractual obligations ^(a)					
Long-term debt	\$ 1,981	\$ —	\$ 165	\$ 1,216	\$ 600
Interest payments ^(b)	459	71	139	125	124
Operating lease obligations	323	43	77	61	142
Finance lease obligations	108	8	16	16	68
Employee benefit obligations ^(c)	108	14	18	20	56
Purchase commitments	10	8	2	—	—
Total contractual obligations	\$ 2,989	\$ 144	\$ 417	\$ 1,438	\$ 990

- (a) Other long-term liabilities of approximately \$103 million are excluded from this table as the uncertainty related to the amount and period of cash settlements prevents the Company from making a reasonably reliable estimate. These other long-term liabilities include the Company's net obligations to its former parent company, deferred compensation, unrecognized tax benefits, and self-insurance liabilities that primarily related to workers' compensation claims, among others.
- (b) Includes interest expense on both variable and fixed rate debt assuming no prepayments. Variable interest rates have been assumed to remain constant through the end of the term at the rates that existed as of September 30, 2020.
- (c) Includes estimated funding of pension plans for fiscal 2021, as well as projected benefit payments through fiscal 2030 for Valvoline's unfunded pension plans. Excludes benefit payments from pension plan trust funds.

Pension and other postretirement plan obligations

During fiscal 2020, the Company made cash and non-cash contributions of approximately \$22 million to its U.S. non-qualified and non-U.S. pension plans. Refer to Note 11 of the Notes to Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K for additional information relating to the Company's pension and other postretirement plans.

Dividend payments and share repurchases

During the year ended September 30, 2020, the Company paid \$84 million of cash dividends for \$0.452 per common share and repurchased approximately 3 million shares of its common stock for \$60 million. Share repurchases were made pursuant to the Board authorization on January 31, 2018 to repurchase up to \$300 million of common stock that expired September 30, 2020.

On November 12, 2020, the Board declared a quarterly cash dividend of \$0.125 per share of Valvoline common stock, which is payable on December 15, 2020 to shareholders of record on November 30, 2020. Also on November 12, 2020, the Board authorized Valvoline to repurchase up to \$100 million of its common stock through September 30, 2021. The dividend and share repurchase authorization is part of a broader capital allocation framework to deliver value to shareholders by first driving growth in the business, organically and through acquisitions, and then returning excess cash to shareholders through dividends and share repurchases. Future declarations of quarterly dividends are subject to approval by the Board and may be adjusted as business needs or market conditions change. The timing and amount of any share repurchases will be based on the level of Valvoline's liquidity, general business and market conditions and other factors, including alternative investment opportunities.

Restructuring and related expenses

In the second fiscal quarter of 2019, the Company outlined a broad-based restructuring and cost-savings program that is expected to reduce costs, simplify processes and focus the organization's structure and resources on key growth initiatives. Part of this program includes employee separation actions, which were generally completed during fiscal 2019, with the associated termination benefits substantially paid by the end of 2020.

Since program inception, Valvoline recognized cumulative costs of \$14 million that were primarily recognized during the year ended September 30, 2019. Restructuring expenses include employee severance and termination benefits

provided to employees pursuant to the restructuring program. Restructuring-related expenses consist of those costs beyond those normally included in restructuring and incremental to the Company's normal operating costs. These restructuring-related costs were expensed as incurred and primarily related to third-party professional service fees incurred in connection with execution of the restructuring program. The Company does not expect to incur material remaining costs from these actions.

Results by segment do not include these restructuring and related expenses, which is consistent with the manner by which management assesses the performance and evaluates the results of each segment. Accordingly, these expenses were included in Unallocated and other.

Valvoline's restructuring actions are expected to generate annualized pre-tax savings in the anticipated range of approximately \$40 million to \$50 million from the end of fiscal 2020 with significant benefits delivered during fiscal 2020. The ongoing annual savings are anticipated to benefit operating expenses, including Cost of sales and Selling, general and administrative expenses within the Consolidated Statements of Comprehensive Income, with a portion expected to be reinvested in the business to provide flexibility to address market dynamics in Core North America and to invest in growth opportunities.

Refer to Note 8 of the Notes to Consolidated Financial Statements included in Item 8 of Part II of this Annual Report on Form 10-K for additional details regarding this restructuring program.

Summary

As of September 30, 2020, cash and cash equivalents totaled \$760 million, total debt was \$2.0 billion, and total remaining borrowing capacity was \$548 million. Valvoline's ability to generate positive cash flows from operations is dependent on general economic conditions, the competitive environment in the industry, and is subject to the business and other risk factors described in Item 1A of Part I of this Annual Report on Form 10-K. If the Company is unable to generate sufficient cash flows from operations, or otherwise comply with the terms of its credit facilities, Valvoline may be required to seek additional financing alternatives.

Management believes that the Company has sufficient liquidity based on its current cash and cash equivalents position, cash generated from business operations, and existing financing to meet its required pension and other postretirement plan contributions, debt servicing obligations, tax-related and other contractual commitments, and operating requirements for the next twelve months.

OFF-BALANCE SHEET ARRANGEMENTS

As of September 30, 2020, Valvoline has no contractual obligations that are reasonably likely to have a material effect on the Company's consolidated financial statements that are not fully recorded within the Consolidated Balance Sheets or fully disclosed in the Notes to Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K. As part of Valvoline's normal course of business, it is a party to certain financial guarantees and other commitments, and while these arrangements involve elements of performance and credit risk that are not included in the Consolidated Balance Sheets, such risk is not currently considered reasonably likely to have a material effect on the Company's consolidated financial statements. The possibility that Valvoline would have to make actual cash expenditures in connection with these obligations is largely dependent on the performance of the party whose obligations Valvoline guarantees, or the occurrence of future events.

NEW ACCOUNTING PRONOUNCEMENTS

For a discussion and analysis of recently issued and adopted accounting pronouncements and the impact on Valvoline, refer to Note 2 of the Notes to Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of Valvoline's consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, sales and expenses, and the disclosures of contingent matters. Significant items that are subject to such estimates and assumptions include, but are not limited to, long-lived assets (including intangible assets and goodwill), customer incentives, employee benefit obligations and income taxes. Although management bases its estimates on historical

experience and various other assumptions that are believed to be reasonable under the circumstances, actual results could differ significantly from the estimates under different assumptions or conditions.

Valuation of goodwill and other intangible assets

Goodwill and other intangible assets are primarily established based on the allocation of purchase consideration to the assets acquired and liabilities assumed based on their fair values as of the acquisition date. Valvoline acquired 35 service center stores during fiscal 2020 for an aggregate purchase price of \$40 million. The excess of the fair value of purchase consideration over the fair value of these assets acquired and liabilities assumed is recorded as goodwill or if the fair value of the assets acquired and liabilities assumed exceed the purchase price consideration, a bargain purchase gain is recorded. When determining the fair values of assets acquired and liabilities assumed, management makes significant estimates and assumptions, particularly with respect to intangible assets. Critical estimates in valuing intangible assets include, but are not limited to, expected future cash flows, which includes consideration of future growth rates and margins, customer attrition rates, future changes in technology and brand awareness, and discount rates. Fair value estimates are based on the assumptions management believes a market participant would use in pricing the asset or liability. Identifiable intangible assets are primarily comprised of trademarks and trade names, reacquired franchise rights, and customer relationships.

Goodwill

Goodwill is tested at the reporting unit level for impairment on an annual basis during the fourth fiscal quarter as of July 1 or more frequently if certain events occur indicating that the carrying value of goodwill may be impaired. Judgment is involved in determining if an indicator of impairment has occurred. Such indicators may include a decline in expected cash flows, a significant adverse change in legal factors or in the business climate, a decision to sell a business, unanticipated competition, or slower growth rates, among others. Valvoline's reporting units are consistent with its reportable segments of Quick Lubes (\$316 million in goodwill as of September 30, 2020), Core North America (\$89 million in goodwill as of September 30, 2020), and International (\$40 million in goodwill as of September 30, 2020).

In evaluating goodwill for impairment, Valvoline has the option to first perform a qualitative "step zero" assessment to determine whether further impairment testing is necessary or to perform a quantitative "step one" assessment by comparing the fair value of a reporting unit to its carrying amount, including goodwill. Under the qualitative assessment, an entity is not required to calculate the fair value of a reporting unit unless the entity determines that it is more likely than not that its fair value is less than its carrying amount. Qualitative factors include macroeconomic conditions, industry and market conditions, cost factors, and overall financial performance, among others. The consideration of these factors requires significant judgment and estimates and application of alternative assumptions could produce different results.

Under the step one assessment, if the fair value of a reporting unit is less than its carrying amount, then the amount of the impairment loss, if any, must be measured under "step two" of the impairment analysis. In step two of the analysis, an impairment loss will be recorded equal to the excess of the carrying value of the reporting unit's goodwill over its implied fair value. Fair values of the reporting units are estimated using a weighted methodology considering the output from both the income and market approaches. The income approach incorporates the use of a discounted cash flow ("DCF") analysis. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market shares, sales volumes and prices, costs to produce, tax rates, capital spending, discount rate and working capital changes. Several of these assumptions vary among reporting units, and the cash flow forecasts are generally based on approved strategic operating plans. The market approach is performed using the Guideline Public Companies method which is based on earnings multiple data. The Company also performs a reconciliation between market capitalization and the estimate of the aggregate fair value of the reporting units, including consideration of a control premium.

Valvoline elected to perform a qualitative assessment during fiscal 2020 and determined that it is more likely than not that the fair values of Valvoline's reporting units are in excess of carrying amounts. Valvoline performed a quantitative assessment during fiscal 2019, though no qualitative factors were present that indicated the existence of a potential impairment, and determined that each reporting unit had a fair value that exceeded its carrying value by 130% and more.

Valvoline's goodwill impairment assessment could change in future periods if any or all of the following events were to occur with respect to a particular reporting unit: a significant change in projected business results, a divestiture

decision, significant changes to certain cash flow assumptions, economic deterioration that is more severe or of a longer duration than anticipated, or other significant economic events.

Other intangible assets

Total other intangible assets were \$84 million, net of \$28 million of accumulated amortization as of September 30, 2020. Other intangible assets are evaluated for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Various factors are considered in determining whether a trigger requiring impairment assessment has occurred, such as changes in the expected use of the assets, changes in technology or development of alternative assets, changes in economic conditions, changes in operating performance and changes in expected future cash flows.

If a trigger requiring impairment assessment occurred and the future undiscounted cash flows result in a value that is less than the carrying value, the intangible asset is considered impaired and a loss is recognized based on the amount by which the carrying amount exceeds the estimated fair value. Fair value is determined based on the highest and best use of the assets considered from the perspective of market participants, which may be different than the Company's actual intended use of the assets. Judgment is involved in identifying impairment triggering events, determining asset groups, future undiscounted cash flows and the fair value of asset groups.

There were no significant impairments recognized by the Company during fiscal 2020, 2019, or 2018.

Customer incentives

Valvoline records revenue for the amount that reflects the consideration the Company is expected to be entitled to based on when control of the promised good or service is transferred to the customer. The nature of Valvoline's contracts with customers often give rise to variable consideration that generally decrease the transaction price and consist primarily of promotional rebates and customer pricing discounts based on achieving certain levels of sales activity. Variable consideration is recorded as a reduction of the transaction price at the time of sale and is primarily estimated utilizing the most likely amount method that is expected to be earned as the Company is able to estimate the anticipated discounts within a sufficiently narrow range of possible outcomes based on its extensive historical experience with certain customers, similar programs and management's judgment with respect to estimating customer participation and performance levels. Variable consideration is reassessed at each reporting date and adjustments are made, when necessary. The cost of these programs recognized as a reduction of sales totaled \$332 million, \$346 million and \$357 million in the Consolidated Statements of Comprehensive Income for the years ended September 30, 2020, 2019 and 2018, respectively. A 10% change in the reserves for customer incentive programs as of September 30, 2020 would have affected net earnings by approximately \$6 million in fiscal 2020.

Employee benefit obligations

Valvoline sponsors defined benefit pension and other postretirement plans in the U.S and in certain countries outside the U.S. The majority of these plans were transferred to and assumed by the Company in the Contribution of certain of Ashland's pension and other postretirement benefit obligations and plan assets in late fiscal 2016. As of September 30, 2020, Valvoline's net unfunded pension and other postretirement plan liabilities included in the Consolidated Balance Sheet totaled \$328 million, and the U.S. plans represented 96% of this total obligation. Total pension and other postretirement net periodic benefit income included in the Consolidated Statements of Comprehensive Income for the year ended September 30, 2020 was comprised of the following:

(In millions)	2020
Service costs	\$ 3
Non-service pension and other postretirement net periodic income ^(a)	(37)
Gain on pension and other postretirement plans remeasurement ^(b)	(22)
Total pension and other postretirement net periodic benefit income	<u>\$ (56)</u>

(a) Non-service pension and other postretirement net periodic income includes the expected return on plan assets and amortization of prior service credit, net of interest costs.

(b) Gains on pension and other postretirement plans remeasurement include the change in the actual return on plan assets and net actuarial gains upon remeasurement as of September 30, 2020.

Valvoline recognizes the change in the fair value of plan assets and the net actuarial gains and losses calculated using updated actuarial assumptions as of the measurement date, which for Valvoline is September 30, and when a plan qualifies for an interim remeasurement. The remaining components of pension and other postretirement benefits income are recorded ratably on a quarterly basis. Due to the freeze of U.S. pension benefits effective September 30, 2016, continuing service costs are limited to certain international pension plans, and are reported in the same caption of the Consolidated Statements of Comprehensive Income as the related employee payroll expenses. All components of net periodic benefit income other than service cost are recognized below operating income within Net pension and other postretirement plan income in the Consolidated Statements of Comprehensive Income. The gain on pension and other postretirement plans remeasurement of \$22 million in fiscal 2020 was primarily attributed to higher than expected returns on plan assets and favorable changes in mortality assumptions, partially offset by decreases in discount rates.

Actuarial assumptions

The Company's pension and other postretirement benefit costs and obligations are dependent on actuarial valuations and various assumptions that attempt to anticipate future events and are used in calculating the expense and liabilities relating to these plans. These assumptions include estimates and judgments the Company makes about interest rates, expected long-term investment return on plan assets, and mortality. Though management considers current market conditions and other relevant factors in establishing these assumptions, the actuarial assumptions used may differ materially from actual results due to changing market and economic conditions, longer or shorter life spans of participants, and differences between the actual and expected return on plan assets. These differences may result in a significant impact to the amount of pension or other postretirement benefits cost recorded or that may be recorded.

Changes in assumptions or asset values may have a significant effect on the measurement of expense or income. Significant assumptions the Company must review and set annually and at each measurement date related to its pension and other postretirement benefit obligations are:

- **Expected long-term return on plan assets** — Based on long-term historical actual asset return information, the mix of investments that comprise plan assets and future estimates of long-term investment returns. The Company also deducts various expenses using the fair value of plan assets to estimate expense. The weighted-average long-term expected rate of return on assets assumption was 4.64% for fiscal 2020. In fiscal 2020, the global pension plan assets generated an actual weighted-average return of 14.1%, primarily driven by the market performance of U.S. plan assets based on the Company's investment strategy to hedge plan assets with the movement in liabilities related to changes in the interest rates. However, the expected return on plan assets is designed to be a long-term assumption, and therefore, actual returns will be subject to year-to-year variances. The U.S. pension plans comprise the most significant portion of plan assets, and for fiscal 2021, the expected rate of return on assets assumption for the U.S. pension plans will be 4.40%. The expected long-term return on plan assets assumption has no impact on the reported net liability or net actuarial gains or losses upon remeasurement, but does impact the recognition of recurring non-service net periodic income recorded ratably on a quarterly basis.

Valvoline's pension plans hold a variety of investments designed to diversify risk. Plan assets are invested in equity securities, government and agency securities, corporate debt, and other non-traditional assets such as hedge funds. The investment goal of the pension plans is to achieve an adequate net investment return to provide for future benefit payments to its participants. U.S. target asset allocation percentages as of September 30, 2020 were 25% equity and 75% fixed income investments. The U.S. pension plans are managed by professional investment managers that operate under investment management contracts that include specific investment guidelines, requiring among other actions, adequate diversification and prudent use of risk management practices such as portfolio constraints relating to established benchmarks. Valvoline's investment strategy and management practices relative to plan assets of non-U.S. plans generally are consistent except in those countries where investment of plan assets is dictated by applicable regulations.

- **Discount rate** — Reflects the rates at which benefits could effectively be settled and is based on current investment yields of high-quality corporate bonds. Consistent with historical practice, the Company uses an actuarially-developed full yield curve approach, the above mean yield curve, to match the timing of cash flows of expected future benefit payments from the plans by applying specific spot rates along the yield curve to determine the assumed discount rate. Valvoline's fiscal 2020 expense, excluding actuarial gains

and losses, for both U.S. and non-U.S. pension plans was determined using the spot discount rate as of the beginning of the fiscal year. The service cost and interest cost discount rates for fiscal 2020 pension expense were 1.49% and 2.79%, respectively, and 3.12% and 2.69%, respectively, for other postretirement expense. The weighted-average discount rate at the end of fiscal 2020 was 2.59% for the pension plans and 2.39% for the postretirement health and life plans.

The following table illustrates the estimated impact on hypothetical pension and other postretirement expense that would have resulted from a one percentage point change in discount rates in isolation of impacts on other significant assumptions in the years ended September 30:

(In millions)	2020	2019
Increase in pension expense from:		
Decrease in the discount rate of 1.00%	\$ 263	\$ 268
Increase in other postretirement expense from:		
Decrease in the discount rate of 1.00%	\$ 5	\$ 5

The U.S. qualified pension plans comprise a substantial portion of Valvoline's total employee benefit plan obligation, where the investing strategy for plan assets is targeted to match the duration of the obligation and hedge approximately 90% of the movement in liabilities related to changes in interest rates.

- **Mortality** — Based on the Society of Actuaries PRI-2012 mortality base tables and a mortality improvement scale that follows the 2020 Trustees Report of the Social Security Administration Intermediate Alternative as reflected in the MSS-2020 improvement scale. Valvoline believes the updated mortality improvement scales provide a reasonable assessment of current mortality trends and is an appropriate estimate of future mortality projections.

Other assumptions, including the rate of compensation increase and healthcare cost trend rate, do not have a significant impact on Valvoline's pension and other postretirement benefit plan costs and obligations based upon current plan provisions that have generally frozen benefits and limited costs.

Income taxes

Valvoline is subject to income taxes in the United States and numerous international jurisdictions. Judgment in forecasting taxable income using historical and projected future operating results is required in determining Valvoline's provision for income taxes and the related assets and liabilities. Each increase of \$5 million to income tax expense would impact the fiscal 2020 effective tax rate by one percentage point.

The provision for income taxes includes current income taxes as well as deferred income taxes. Under U.S. GAAP, deferred tax assets and liabilities are determined based on differences between the financial reporting and tax basis of assets and liabilities and are measured using enacted tax rates and laws that are expected to be in effect when the deferred assets or liabilities are expected to be settled or realized. The effect of changes in tax rates on deferred taxes is recognized in the period in which such changes are enacted.

Valuation allowances are established when necessary on a jurisdictional basis to reduce deferred tax assets to the amounts expected to be realized when it is more likely than not that some portion or all of a deferred tax asset will not be realized. The determination as to whether a deferred tax asset will be realized is based on the evaluation of positive and negative evidence, which includes historical profitability, future market growth, future taxable income, the expected timing of the reversals of existing temporary differences and tax planning strategies. The Company assesses deferred taxes and the adequacy or need for a valuation allowance on a quarterly basis. As of September 30, 2020, the Company had \$192 million of deferred tax assets, including \$30 million in valuation allowances. If the Company is unable to generate sufficient future taxable income, there is a material change in the actual effective tax rates, the time period within which the underlying temporary differences become taxable or deductible, or if the tax laws change unfavorably, then Valvoline could be required to increase the valuation allowance against deferred tax assets, resulting in an increase in income tax expense and the effective tax rate.

As a result of the separation from Ashland, Valvoline agreed to indemnify Ashland for certain income tax matters. As of September 30, 2020, Valvoline's liability for these estimated indemnification obligations is \$34 million. Valvoline

generally records a liability when it is probable and reasonably estimable that indemnification will be due to Ashland and makes adjustments through earnings in the period that changes are known. Certain of these judgments require management to estimate its use of tax attributes generated in the pre-Distribution periods, as well as to evaluate the likelihood and potential magnitude of tax positions taken in consolidated Ashland returns in the periods prior to Distribution expected to be sustained upon examination by the taxing authorities.

The Company is subject to ongoing tax examinations and assessments in various jurisdictions, including those in the pre-Distribution periods. At any time, multiple tax years are subject to audit by the various tax authorities and a number of years may elapse before a particular matter, for which a liability has been established, is audited and fully resolved or clarified. In evaluating the exposures associated with various tax filing positions, including its indemnification obligations to Ashland, the Company may record liabilities for such exposures. The Company's liabilities for these matters are currently largely recorded within its indemnification obligation to Ashland. Valvoline generally adjusts its liabilities for unrecognized tax benefits and related indemnification obligations through earnings in the period in which an uncertain tax position is effectively settled, the statute of limitations expires for the relevant taxing authority to examine the tax position, or when more information becomes available. Although management believes that the judgments and estimates discussed herein are reasonable, actual results could differ, and may materially increase or decrease the effective tax rate, as well as impact the Company's operating results.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Valvoline is exposed to market risks arising from adverse changes in:

- Currency exchange rates;
- Inflation and changing prices;
- Interest rates; and
- Credit risk.

Currency exchange risk

A significant portion of Valvoline's operations and revenue occur outside the U.S., and in currencies other than the U.S. Dollar, and the Company's results can be significantly impacted by changes in currency exchange rates. Valvoline's currency risk is primarily limited to the Euro, Australian Dollar, Canadian Dollar and Chinese Yuan with respect to sales, profits, and assets and liabilities denominated in currencies other than the U.S. Dollar. Although the Company uses financial instruments to hedge certain currency risks, Valvoline is not fully protected against currency fluctuations and reported results of operations could be affected by changes in currency exchange rates. Valvoline believes its currency risk is limited as 75% of Valvoline's revenue during fiscal 2020, 74% during the year ended fiscal 2019 and 72% during fiscal 2018 are attributed to the sales in the United States. Valvoline does not have material exposures to market risk with respect to investments.

To manage exposures and mitigate the impact of currency fluctuations on the operations of non-U.S. subsidiaries, the Company uses derivatives not designated as hedging instruments consisting primarily of forward contracts to hedge currency denominated balance sheet exposures. For these derivatives, changes in the fair value are recognized in income to offset the gain or loss on the hedged item in the same period as the remeasurement losses and gains of the related currency-denominated exposures. The Company utilizes derivative instruments that are purchased exclusively from highly-rated financial institutions. These contracts are recorded on the Consolidated Balance Sheets as assets or liabilities at fair market value based upon market price quotations. The Company did not transact or have open any hedging contracts with respect to commodities as of and for the year ended September 30, 2020, nor does Valvoline employ derivatives for trading or speculative purposes.

For purposes of analyzing potential risk, sensitivity analysis is used to quantify potential impacts that market rate changes may have on the fair values of the Company's derivative portfolio. The sensitivity analysis represents the hypothetical changes in value of the derivative and does not reflect the related gain or loss on the forecasted underlying exposure. A 10% appreciation or depreciation in the value of the U.S. Dollar against non-U.S. currencies from the prevailing market rates would have resulted in a corresponding increase or decrease of \$13 million as of September 30, 2020 in the fair value of open derivative contracts. The Company expects that any increase or decrease in the fair value of the portfolio would be substantially offset by increases or decreases in the underlying exposures.

The U.S. Dollar was stronger in fiscal 2020 compared to 2019 based on comparable weighted averages for the Company's functional currencies. This had an unfavorable impact of 0.5% on fiscal 2020 revenue versus 2019 revenue. This excludes the effects of derivative activities and other financial measures, and therefore, does not reflect the actual impact of fluctuations in exchange rates on the Company's operating income.

Inflation and changing prices

Valvoline's financial statements are prepared on the historical cost method of accounting in accordance with U.S. GAAP, and as a result, do not reflect changes in the purchasing power of the U.S. Dollar. Monetary assets (such as cash, cash equivalents and accounts receivable) lose purchasing power as a result of inflation, while monetary liabilities (such as accounts payable and indebtedness) gain because they can be settled with dollars of diminished purchasing power. As of September 30, 2020, Valvoline's monetary assets were less than its monetary liabilities, leaving the Company currently less exposed to the effects of future inflation.

Replacement costs for Valvoline's plants and equipment generally would exceed their historical costs. Accordingly, depreciation expense would be greater if it were based on current replacement costs. However, because replacement facilities and assets would reflect technological improvements and changes in business strategies,

these would be expected to be more productive than existing assets, mitigating at least part of the risk of changing prices.

Valvoline uses the last-in, first-out ("LIFO") method to value a portion of its inventories to provide a better matching of revenues with current costs, though utilizing LIFO during inflationary periods values such inventories below their replacement costs.

Interest rate risk

The Company is subject to interest rate risk in relation to variable-rate debt. During fiscal 2020, the Company entered into four interest rate swap agreements with notional amounts totaling \$350 million to manage exposure to changes in cash flows associated with its variable rate term loan. The swap agreements qualify and are designated as cash flow hedges, converting the floating interest rate to a fixed interest rate plus a spread from the effective date through the term of the Company's existing credit facility. As a result of those agreements entered into during the year, the Company's outstanding borrowings with fixed rates increased to approximately 88% as of September 30, 2020. The increase in pre-tax interest expense for the year ended September 30, 2020 from a hypothetical 100 basis point increase in variable interest rates would be approximately \$2 million.

In addition, the Company is exposed to market risk relative to the impact of changes in interest rates and investment returns on its pension and other postretirement plans. Declines in the discount rates used in measuring the Company's pension and other postretirement plan obligations result in a higher obligation and decrease the funded status. The pension plans hold a variety of investments designed to diversify risk, protect against declines in interest rates, and achieve an adequate net investment return to provide for future benefit payments to its participants. These investments are subject to volatility that can be caused by fluctuations in general economic conditions. Decreases in the fair value of plan assets and discount rates increase net pension and other postretirement plan expense and can also result in requirements to make contributions to the plans. Pension and other postretirement plans were underfunded by \$328 million at September 30, 2020 as the projected benefit obligation exceeded the fair value of plan assets.

Concentrations of credit risk

The Company is potentially subject to concentrations of credit risk on accounts receivable and financial instruments, such as derivative instruments and cash and cash equivalents. Credit risk includes the risk of nonperformance by counterparties. The maximum potential loss may exceed the amount recognized on the Consolidated Balance Sheet. Exposure to credit risk is managed through credit approvals, credit limits, selecting highly-rated financial institutions as counterparties to transactions and monitoring procedures. To mitigate losses in the event of nonperformance by counterparties in derivative transactions, Valvoline has entered into master netting arrangements that allow settlement with counterparties on a net basis.

Valvoline's business often involves large transactions with customers for which the Company does not require collateral. If one or more of those customers were to default in its obligations under applicable contractual arrangements, the Company could be exposed to potentially significant losses. Moreover, a prolonged downturn in the global economy could have an adverse impact on the ability of customers to pay their obligations on a timely basis. The Company believes that the reserves for potential losses are adequate. As of September 30, 2020, there was not a significant concentration of credit risk related to financial instruments.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

	Page
Index to Financial Statements and Supplementary Data	
Report of Independent Registered Public Accounting Firm	60
Consolidated Statements of Comprehensive Income	62
Consolidated Balance Sheets	63
Consolidated Statements of Stockholders' Deficit	64
Consolidated Statements of Cash Flows	65
Notes to Consolidated Financial Statements	66
Note 1 - Description of Business and Basis of Presentation	66
Note 2 - Significant Accounting Policies	66
Note 3 - Leasing	77
Note 4 - Fair Value Measurements	80
Note 5 - Acquisitions and Divestitures	82
Note 6 - Equity Method Investments	83
Note 7 - Intangible Assets	84
Note 8 - Restructuring Activities	85
Note 9 - Debt	86
Note 10 - Income Taxes	90
Note 11 - Employee Benefit Plans	93
Note 12 - Litigation, Claims and Contingencies	100
Note 13 - Stock-Based Compensation Plans	100
Note 14 - Earnings Per Share	103
Note 15 - Accumulated Other Comprehensive Income	104
Note 16 - Reportable Segment Information	105
Note 17 - Supplemental Balance Sheet Information	108
Note 18 - Quarterly Financial Information	110
Note 19 - Subsequent Events	110

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of
Valvoline Inc. and Consolidated Subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Valvoline Inc. and Consolidated Subsidiaries (the Company) as of September 30, 2020 and 2019, the related consolidated statements of comprehensive income, stockholders' deficit and cash flows for each of the three years in the period ended September 30, 2020, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at September 30, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of September 30, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated November 24, 2020, expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

As discussed in Note 2 to the consolidated financial statements, the Company changed its method for accounting for leases in 2020 and changed its method of accounting for revenue in 2019.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter 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 account or disclosure to which it relates.

Valuation of Employee Benefit Obligations

Description of the Matter

At September 30, 2020, the Company's aggregate defined benefit pension and other postretirement obligations (together, the "Employee Benefit Obligations") were \$2,373 million and exceeded the fair value of pension plan assets of \$2,045 million, resulting in unfunded net Employee Benefit Obligations of \$328 million. As explained in Note 11 of the consolidated financial statements, the Company recognizes the change in the net actuarial gains and losses annually in the fourth quarter of each fiscal year and whenever a plan is determined to qualify for a remeasurement to reflect the updated actuarial assumptions. The remaining components of pension and other postretirement benefits cost are recorded ratably throughout the year.

Auditing the valuation of the Employee Benefit Obligations was complex due to the judgmental nature of the actuarial assumptions (e.g., discount rate and mortality rate) used in the measurement process. These assumptions have a significant effect on the projected benefit obligations.

How We Addressed the Matter in Our Audit

We tested controls that address the risks of material misstatements related to the valuation of the Employee Benefit Obligations. For example, we tested controls over management's review of the significant actuarial assumptions and the completeness and accuracy of the data inputs provided to the actuary. Where judgment was exercised by management, our audit procedures included testing controls over management's evaluation of the assumptions used in developing the Employee Benefit Obligations, including reviews of the selected mortality and discount rates with the Company's independent actuary.

To test the Employee Benefit Obligations, our audit procedures included, among others, evaluating the methodology used, the significant actuarial assumptions discussed above, and the underlying data used by the Company. We compared the actuarial assumptions used by management to its historical accounting practices and evaluated the change in the Employee Benefit Obligations from the prior year due to the change in service cost, interest cost, actuarial gains and losses, benefit payments, contributions and other activities. In addition, we involved an actuarial specialist to assist with our procedures. For example, the discount rate reflects the rates at which benefits could effectively be settled and is based on current investment yields of high-quality corporate bonds. The Company uses an actuarially-developed full yield curve approach in establishing its discount rate. We evaluated management's methodology for determining the discount rate that reflects the maturity and duration of the benefit payments. As part of this assessment, we tested the underlying securities used to develop the yield curve to evaluate whether they were appropriate for use in a yield curve and whether the provided yield curve reasonably followed from those securities. To evaluate the mortality rate, we assessed whether the information was consistent with publicly available information, and whether any market data adjusted for entity-specific adjustments were applied. We also tested the completeness and accuracy of the underlying data, including the participant data.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2016.

Cincinnati, Ohio
November 24, 2020

Valvoline Inc. and Consolidated Subsidiaries
Consolidated Statements of Comprehensive Income

(In millions, except per share amounts)	Years ended September 30		
	2020	2019	2018
Sales	\$ 2,353	\$ 2,390	\$ 2,285
Cost of sales	1,490	1,580	1,479
Gross profit	863	810	806
Selling, general and administrative expenses	442	449	430
Net legacy and separation-related (income) expenses	(30)	3	14
Equity and other income, net	(34)	(40)	(33)
Operating income	485	398	395
Net pension and other postretirement plan (income) expenses	(59)	60	—
Net interest and other financing expenses	93	73	63
Income before income taxes	451	265	332
Income tax expense	134	57	166
Net income	\$ 317	\$ 208	\$ 166
NET EARNINGS PER SHARE			
Basic	\$ 1.70	\$ 1.10	\$ 0.84
Diluted	\$ 1.69	\$ 1.10	\$ 0.84
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING			
Basic	187	189	197
Diluted	188	189	197
COMPREHENSIVE INCOME			
Net income	\$ 317	\$ 208	\$ 166
Other comprehensive income (loss), net of tax			
Currency translation adjustments	7	(12)	(10)
Amortization of pension and other postretirement plan prior service credits	(9)	(9)	(9)
Unrealized loss on cash flow hedges	(1)	—	—
Other comprehensive loss	(3)	(21)	(19)
Comprehensive income	\$ 314	\$ 187	\$ 147

See Notes to Consolidated Financial Statements.

Valvoline Inc. and Consolidated Subsidiaries

Consolidated Balance Sheets

(In millions, except per share amounts)	As of September 30	
	2020	2019
Assets		
Current assets		
Cash and cash equivalents	\$ 760	\$ 159
Receivables, net	433	401
Inventories, net	199	194
Prepaid expenses and other current assets	46	43
Total current assets	1,438	797
Noncurrent assets		
Property, plant and equipment, net	613	498
Operating lease assets	261	—
Goodwill and intangibles, net	529	504
Equity method investments	44	34
Deferred income taxes	34	123
Other noncurrent assets	132	108
Total noncurrent assets	1,613	1,267
Total assets	\$ 3,051	\$ 2,064
Liabilities and Stockholders' Deficit		
Current liabilities		
Current portion of long-term debt	\$ —	\$ 15
Trade and other payables	189	171
Accrued expenses and other liabilities	255	237
Total current liabilities	444	423
Noncurrent liabilities		
Long-term debt	1,962	1,327
Employee benefit obligations	317	387
Operating lease liabilities	231	—
Other noncurrent liabilities	173	185
Total noncurrent liabilities	2,683	1,899
Commitments and contingencies		
Stockholders' deficit		
Preferred stock, no par value, 40 shares authorized; no shares issued and outstanding	—	—
Common stock, par value \$0.01 per share, 400 shares authorized, 185 and 188 shares issued and outstanding at September 30, 2020 and 2019, respectively	2	2
Paid-in capital	24	13
Retained deficit	(110)	(284)
Accumulated other comprehensive income	8	11
Total stockholders' deficit	(76)	(258)
Total liabilities and stockholders' deficit	\$ 3,051	\$ 2,064

See Notes to Consolidated Financial Statements.

Valvoline Inc. and Consolidated Subsidiaries
Consolidated Statements of Stockholders' Deficit

(In millions, except per share amounts)	Common stock		Paid-in capital	Retained deficit	Accumulated other comprehensive income (loss)	Totals
	Shares	Amount				
Balance at September 30, 2017	203	\$ 2	\$ 5	\$ (167)	\$ 43	\$ (117)
Net income	—	—	—	166	—	166
Dividends paid, \$0.298 per common share	—	—	—	(58)	—	(58)
Stock-based compensation, net of issuances	—	—	9	—	—	9
Repurchase of common stock	(15)	—	—	(325)	—	(325)
Purchase of remaining ownership in subsidiary	—	—	(7)	(7)	—	(14)
Reclassification of income tax effects of U.S. tax reform	—	—	—	(8)	8	—
Other comprehensive loss, net of tax	—	—	—	—	(19)	(19)
Balance at September 30, 2018	188	2	7	(399)	32	(358)
Net income	—	—	—	208	—	208
Dividends paid, \$0.424 per common share	—	—	—	(80)	—	(80)
Stock-based compensation, net of issuances	—	—	6	—	—	6
Cumulative effect of adoption of new revenue standard, net of tax	—	—	—	(13)	—	(13)
Other comprehensive loss, net of tax	—	—	—	—	(21)	(21)
Balance at September 30, 2019	188	2	13	(284)	11	(258)
Net income	—	—	—	317	—	317
Dividends paid, \$0.452 per common share	—	—	—	(84)	—	(84)
Stock-based compensation, net of issuances	—	—	11	—	—	11
Repurchase of common stock	(3)	—	—	(60)	—	(60)
Cumulative effect of adoption of new leasing standard, net of tax	—	—	—	1	—	1
Other comprehensive loss, net of tax	—	—	—	—	(3)	(3)
Balance at September 30, 2020	185	\$ 2	\$ 24	\$ (110)	\$ 8	\$ (76)

See Notes to Consolidated Financial Statements.

Valvoline Inc. and Consolidated Subsidiaries

Consolidated Statements of Cash Flows

(In millions)

	Years ended September 30		
	2020	2019	2018
Cash flows from operating activities			
Net income	\$ 317	\$ 208	\$ 166
Adjustments to reconcile to cash flows from operations			
Loss on extinguishment of debt	19	—	—
Depreciation and amortization	66	61	54
Deferred income taxes	92	23	145
Equity income from unconsolidated affiliates, net of distributions	(7)	(3)	(4)
Pension contributions	(11)	(10)	(16)
(Gain) loss on pension and other postretirement plan remeasurements	(22)	69	38
Stock-based compensation expense	12	9	12
Other, net	2	(2)	4
Change in assets and liabilities			
Receivables	(11)	(30)	(38)
Inventories	(1)	(10)	(4)
Payables and accrued liabilities	(3)	37	(2)
Other assets and liabilities	(81)	(27)	(35)
Total cash provided by operating activities	372	325	320
Cash flows from investing activities			
Additions to property, plant and equipment	(151)	(108)	(93)
Notes receivable, net of repayments	(31)	(2)	—
Acquisitions of businesses	(40)	(78)	(125)
Other investing activities, net	—	—	5
Total cash used in investing activities	(222)	(188)	(213)
Cash flows from financing activities			
Proceeds from borrowings	1,558	752	305
Payments of debt issuance costs and discounts	(16)	(2)	(1)
Repayments on borrowings	(929)	(734)	(108)
Premium paid to extinguish debt	(15)	—	—
Repurchases of common stock	(60)	—	(325)
Payments for purchase of additional ownership in subsidiary	—	(1)	(15)
Cash dividends paid	(84)	(80)	(58)
Other financing activities	(4)	(6)	(7)
Total cash provided by (used in) financing activities	450	(71)	(209)
Effect of currency exchange rate changes on cash, cash equivalents, and restricted cash	2	(3)	(3)
Increase (decrease) in cash, cash equivalents, and restricted cash	602	63	(105)
Cash, cash equivalents, and restricted cash - beginning of year	159	96	201
Cash, cash equivalents, and restricted cash - end of year	\$ 761	\$ 159	\$ 96
Supplemental disclosures			
Interest paid	\$ 65	\$ 67	\$ 53
Income taxes paid	\$ 44	\$ 25	\$ 26

See Notes to Consolidated Financial Statements.

NOTE 1 – DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

Description of business

Valvoline Inc. (“Valvoline” or the “Company”) is a worldwide marketer and supplier of engine and automotive maintenance products and services. Valvoline is one of the most recognized premium consumer brands in the global automotive lubricant and preventative maintenance industry, known for its high quality products and superior levels of service. Established in 1866, Valvoline’s heritage spans over 150 years, during which it has developed name recognition across multiple product and service channels.

Basis of presentation and consolidation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and U.S. Securities and Exchange Commission (“SEC”) regulations. The financial statements are presented on a consolidated basis for all periods presented and include the operations of the Company and its majority-owned and controlled subsidiaries. All intercompany transactions and balances within Valvoline have been eliminated in consolidation.

Certain prior period amounts have been reclassified in the accompanying consolidated financial statements and notes thereto to conform to the current period presentation.

NOTE 2 – SIGNIFICANT ACCOUNTING POLICIES

Valvoline’s significant accounting policies, which conform to U.S. GAAP and are applied on a consistent basis in all periods presented, except when otherwise disclosed, are described below.

Use of estimates, risks and uncertainties

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosures of contingent matters. Significant items that are subject to such estimates and assumptions include, but are not limited to, long-lived assets (including intangible assets and goodwill), customer incentives, employee benefit obligations and income taxes. Although management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, actual results could differ significantly from the estimates under different assumptions or conditions.

In late December 2019, coronavirus (“COVID-19”) was identified in Wuhan, China and since that time it has continued to spread, including to the United States, leading the World Health Organization to declare a global pandemic and recommend containment and mitigation actions worldwide in March 2020. The Company has substantially maintained its operations during the pandemic to-date, and precautionary measures have been taken to protect the Company’s employees and customers, maintain liquidity, support its franchisees, and manage through currently known impacts of the pandemic. Given the unprecedented nature of the pandemic, the extent of future impacts cannot be reasonably estimated at this time due to numerous uncertainties, including the duration and severity of the pandemic.

Cash and cash equivalents

All short-term, highly liquid investments having original maturities of three months or less are considered to be cash equivalents.

Receivables and allowance for doubtful accounts

Valvoline invoices customers once or as performance obligations are satisfied, at which point payment becomes unconditional. As the majority of the Company’s performance obligations are satisfied at a point in time and customers typically do not make material payments in advance, nor does Valvoline have a right to consideration in advance of control transfer, the Company has no contract assets or contract liabilities. The Company recognizes a

receivable on its Consolidated Balance Sheets when the Company performs a service or transfers a product in advance of receiving consideration and its right to consideration is unconditional and only the passage of time is required before payment of that consideration is due.

Receivables are recorded at net realizable value, and Valvoline records an allowance for doubtful accounts as a best estimate of the amount of probable credit losses. Valvoline estimates the allowance for doubtful accounts based on a variety of factors, including the length of time receivables are past due, the financial health of its customers, macroeconomic conditions, past transaction history with the customer, and changes in customer payment terms. If the financial condition of its customers deteriorates or other circumstances occur that result in an impairment of customers' ability to make payments, the Company records additional allowances as needed. The Company writes off uncollectible receivables against the allowance when collection efforts have been exhausted and/or any legal action taken by the Company has concluded.

Inventories

Inventories are primarily carried at the lower of cost or net realizable value using the weighted average cost method. In addition, certain lubricants are valued at the lower of cost or market using the last-in, first-out ("LIFO") method to provide matching of revenues with current costs. Costs include materials, labor and manufacturing overhead related to the purchase and production of inventories. The Company regularly reviews inventory quantities on hand and the estimated utilization of inventory. Excess and obsolete reserves are established when inventory is estimated to not be usable based on forecasted usage, product demand and life cycle, as well as utility.

Property, plant and equipment

Property, plant and equipment is recorded at cost and is depreciated using the straight-line method over the estimated useful lives of the assets. Buildings are depreciated principally over 10 to 25 years and machinery and equipment is generally depreciated over 5 to 30 years. Building and leasehold improvements are depreciated over the shorter of their estimated useful lives or the period from which the date the assets are placed in service to the end of the lease term, as appropriate. Property, plant and equipment is relieved of the cost and related accumulated depreciation when assets are disposed of or otherwise retired. Gains or losses on the dispositions of property, plant and equipment are included in the Consolidated Statements of Comprehensive Income and generally reported in Equity and other income, net.

Property, plant and equipment carrying values are evaluated for recoverability when impairment indicators are present and are conducted at the lowest level of identifiable cash flows. Such indicators could include, among other factors, operating losses, unused capacity, market value declines and technological obsolescence. Recorded values of asset groups of property, plant and equipment that are not expected to be recovered through undiscounted future net cash flows are written down to current fair value, which generally is determined from estimated discounted future net cash flows (assets held for use) or net realizable value (assets held for sale).

Leases

Lessee arrangements

Certain of the properties Valvoline utilizes, including quick-lube service center stores, offices, blending and warehouse facilities, in addition to certain equipment, are leased. Valvoline determines if an arrangement contains a lease at inception primarily based on whether or not the Company has the right to control the asset during the contract period. For all agreements where it is determined that a lease exists, the related lease assets and liabilities are recognized on the Consolidated Balance Sheet as either operating or finance leases at the commencement date.

The lease liability is measured at the present value of future lease payments over the lease term, and the right-of-use asset is measured at the lease liability amount, adjusted for prepaid lease payments, lease incentives, and the lessee's initial direct costs (e.g., commissions). Valvoline includes leases with an initial term of 12 months or less in the measurement of its right-of-use asset and lease liability balances, which generally have terms ranging from less than one year to more than 20 years. The lease term includes options to extend or terminate the lease when it is reasonably certain that the option will be exercised.

Fixed payments, including variable payments based on a rate or index, are included in the determination of the lease liability, while other variable payments are recognized in the Consolidated Statements of Comprehensive Income in the period in which the obligation for those payments is incurred. Many leases contain lease components requiring rental payments and other components that require payment for taxes, insurance, operating expenses and maintenance. In instances where these other components are fixed, they are included in the measurement of the lease liability due to Valvoline's election to combine lease and non-lease components and account for them as a single lease component. Otherwise, these other components are expensed as incurred and comprise the majority of Valvoline's variable lease costs.

As most leases do not provide the rate implicit in the lease, the Company estimates its incremental borrowing rate to best approximate the rate of interest that Valvoline would have to pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. Valvoline applies the incremental borrowing rate to groups of leases with similar lease terms in determining the present value of future payments. In determining the incremental borrowing rate, the Company considers information available at the commencement date, including lease term, interest rate yields for specific interest rate environments and the Company's credit spread.

Lesser arrangements

Valvoline is the lessor in arrangements to sublease and lease certain properties and equipment. Activity associated with these leases is not material.

Business combinations

The Company allocates the purchase consideration to the identifiable assets acquired and liabilities assumed in business combinations based on their acquisition-date fair values. The excess of the purchase consideration over the amounts assigned to the identifiable assets and liabilities is recognized as goodwill, or if the fair value of the net assets acquired exceeds the purchase consideration, a bargain purchase gain is recorded. Factors giving rise to goodwill generally include operational synergies that are anticipated as a result of the business combination and growth expected to result in economic benefits from access to new customers and markets. The fair values of identifiable intangible assets acquired in business combinations are generally determined using an income approach, requiring financial forecasts and estimates as well as market participant assumptions.

The incremental financial results of the businesses that Valvoline has acquired are included in the Company's consolidated financial results from the respective dates of each acquisition.

Goodwill and other intangible assets

Valvoline tests goodwill for impairment annually as of July 1 or when events and circumstances indicate an impairment may have occurred. This annual assessment consists of Valvoline determining each reporting unit's current fair value compared to its current carrying value. Valvoline's reporting units are Quick Lubes, Core North America, and International.

In evaluating goodwill for impairment, Valvoline has the option to first perform a qualitative "step zero" assessment to determine whether further impairment testing is necessary or to perform a quantitative "step one" assessment by comparing the fair value of a reporting unit to its carrying amount, including goodwill. Under the qualitative assessment, an entity is not required to calculate the fair value of a reporting unit unless the entity determines that it is more likely than not that its fair value is less than its carrying amount. Qualitative factors include macroeconomic conditions, industry and market conditions, cost factors, and overall financial performance, among others.

Under the step one assessment, if the fair value of a reporting unit is less than its carrying amount, then the amount of the impairment loss, if any, must be measured under "step two" of the impairment analysis. In step two of the analysis, an impairment loss will be recorded equal to the excess of the carrying value of the reporting unit's goodwill over its implied fair value. Fair values of the reporting units are estimated using a weighted methodology considering the output from both the income and market approaches. The income approach incorporates the use of a discounted cash flow ("DCF") analysis. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market shares, sales volumes and prices, costs to produce, tax rates, capital spending, discount rate, weighted average cost of capital, terminal

values and working capital changes. Several of these assumptions vary among reporting units, and the cash flow forecasts are generally based on approved strategic operating plans. The market approach is performed using the Guideline Public Companies method which is based on earnings multiple data. The Company also performs a reconciliation between market capitalization and the estimate of the aggregate fair value of the reporting units, including consideration of a control premium.

Valvoline elected to perform a qualitative assessment during fiscal 2020 and determined that it is not more likely than not that the fair values of Valvoline's reporting units are less than carrying amounts.

Acquired finite-lived intangible assets principally consist of certain trademarks and trade names, reacquired franchise rights and customer relationships. Intangible assets acquired in an asset acquisition are carried at cost, less accumulated amortization. For intangible assets acquired in a business combination, the estimated fair values of the assets acquired are used to establish the carrying values, which are determined using assumptions from the perspective of a market participant and generally an income approach. These intangible assets are amortized on a straight-line basis over their estimated useful lives. Valvoline evaluates finite-lived intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable, and any assets not expected to be recovered through undiscounted future net cash flows are written down to current fair value.

Equity method investments

Investments in companies, including joint ventures, where Valvoline has the ability to exert significant influence over, but not control, operating and financial policies of the investee are accounted for using the equity method of accounting. Judgment regarding the level of influence over each investment includes considering key factors such as the Company's ownership interest, representation on the board of directors, and participation in policy-making decisions. The Company's proportionate share of the net income or loss of these companies is included within Equity and other income, net in the Consolidated Statements of Comprehensive Income.

The Company evaluates equity method investments for impairment whenever events or changes in circumstances indicate that the carrying amount of the investment might not be recoverable. Factors considered by the Company when reviewing an equity method investment for impairment include the length of time and extent to which the fair value of the equity method investment has been less than cost, the investee's financial condition and near-term prospects, and the intent and ability to hold the investment for a period of time sufficient to allow for anticipated recovery. An impairment that is other-than-temporary is recognized in the period identified.

Pension and other postretirement benefit plans

Valvoline sponsors defined benefit pension and other postretirement plans in the U.S and in certain countries outside the U.S. Valvoline recognizes the funded status of each applicable plan on the Consolidated Balance Sheets whereby each underfunded plan is recognized as a liability. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation. Changes in the fair value of plan assets and net actuarial gains or losses are recognized upon remeasurement as of September 30, the annual measurement date, and whenever a remeasurement is triggered. The remaining components of pension and other postretirement benefits expense / income are recorded ratably on a quarterly basis. The fair value of plan assets represents the current market value of assets held by irrevocable trust funds for the sole benefit of participants, and the benefit obligation is the actuarial present value of the benefits expected to be paid upon retirement, death, or other distributable event based on estimates. These valuations reflect the terms of the plans and use participant-specific information such as compensation, age and years of service, as well as certain key assumptions that require significant judgment, including, but not limited to, estimates of discount rates, rate of compensation increases, interest rates and mortality rates. Actuarial gains and losses may be related to actual results that differ from assumptions as well as changes in assumptions, which may occur each year.

Due to the freeze of U.S. pension benefits effective September 30, 2016, continuing service costs are limited to certain international pension plans, and are reported in the same caption of the Consolidated Statements of Comprehensive Income as the related employee payroll expenses. All components of net periodic benefit cost / income other than service cost are recognized below operating income within Net pension and other postretirement plan expense / income in the Consolidated Statements of Comprehensive Income.

Commitments and contingencies

Liabilities for loss contingencies arising from claims, assessments, litigation, fines, penalties and other sources are recorded when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Legal costs such as outside counsel fees and expenses are charged to expense in the period incurred and are recorded in Selling, general and administrative expenses in the Consolidated Statements of Comprehensive Income.

Revenue recognition

Revenue is recognized for the amount that reflects the consideration the Company is expected to be entitled to receive based on when control of the promised good or service is transferred to the customer. Revenue recognition is evaluated through the following five steps: (i) identification of the contract(s) with a customer; (ii) identification of the performance obligation(s) in the contract(s); (iii) determination of the transaction price; (iv) allocation of the transaction price to the performance obligation(s) in the contract(s); and (v) recognition of revenue when or as a performance obligation is satisfied.

Nature of goods and services

Valvoline generates all revenues from contracts with customers, primarily as a result of the sale and service delivery of engine and automotive maintenance products to customers. Valvoline derives its sales from its broad line of products and complementary services through the following three principal activities managed across its three reportable segments: (i) engine and automotive maintenance products, (ii) company-owned quick-lube operations, and (iii) franchised quick-lube operations. Valvoline's sales are generally to retail, installer, industrial, distributor, franchise, and end consumers to facilitate vehicle and equipment service and maintenance.

Valvoline's sales are predominantly comprised of products and services sold at a point in time with approximately 98% recognized either through ship-and-bill performance obligations or company-owned quick-lube operations. The remainder of the Company's sales generally relate to franchise fees transferred over time. The following table summarizes Valvoline's sales by timing of revenue recognized for the fiscal years ended September 30:

(In millions)	2020	2019	2018
Sales at a point in time	\$ 2,313	\$ 2,346	\$ 2,256
Franchised revenues transferred over time	40	44	29
Total consolidated sales	\$ 2,353	\$ 2,390	\$ 2,285

Below is a summary of the key considerations for Valvoline's material revenue-generating activities:

Engine and automotive maintenance products

Engine and automotive maintenance products primarily include lubricants, antifreeze, chemicals, filters, and other complementary products for use across a wide array of vehicles and engines. The Company's customers typically enter into a sales agreement which outlines a framework of terms and conditions that apply to all current and future purchase orders for the customer submitted under such sales agreement. In these situations, the Company's contract with the customer is the sales agreement combined with the customer purchase order as specific products and quantities are not indicated until a purchase order is submitted. As the Company's contract with the customer is typically for a single purchase order under the supply agreement to be delivered at a point in time, the duration of the contract is almost always one year or less. The Company's products are distinct and separately identifiable on customer purchase orders, with each product sale representing a separate performance obligation that is generally delivered simultaneously. Valvoline is the principal to these contracts as the Company has control of the products prior to transfer to the customer. Accordingly, revenue is recognized on a gross basis.

The Company determines the point in time at which control is transferred and the performance obligation is satisfied by considering when the customer has the ability to direct the use of and obtain substantially all of the remaining benefits of the product, which generally coincides with the transfer of title and risk of loss to the customer and is typically determined based on delivery terms within the underlying contract.

Customer payment terms vary by region and customer and are generally 30 to 60 days after delivery. Valvoline does not provide extended payment terms greater than one year.

Company-owned quick-lube operations

Performance obligations related to company-owned quick-lube operations primarily include the sale of engine and automotive maintenance products and related services. These performance obligations are distinct and are delivered simultaneously at a point in time. Accordingly, revenue from company-owned quick-lube operations is recognized when payment is tendered at the point of sale, which coincides with the completion of product and service delivery and the transfer of control and benefits from the performance obligations to the customer.

Franchised quick-lube operations

The primary performance obligations related to franchised quick-lube operations include product sales as described above and the license of intellectual property, which provides access to the Valvoline brand and proprietary information to operate service center stores over the term of a franchise agreement. Other franchise performance obligations do not result in material revenue. Each performance obligation is distinct, and franchisees generally receive and consume the benefits provided by the Company's performance over the course of the franchise agreement, which typically ranges from 10 to 15 years. Billings and payments occur monthly.

In exchange for the license of Valvoline intellectual property, franchisees generally remit initial fees upon opening a service center store and royalties at a contractual rate of the applicable service center store sales over the term of the franchise agreement. The license provides access to the intellectual property over the term of the franchise agreement and is considered a right-to-access license of symbolic intellectual property as substantially all of its utility is derived from association with the Company's past and ongoing activities. The license granted to operate each franchised service center store is the predominant item to which the royalties relate and represents a distinct performance obligation which is recognized over time as the underlying sales occur, as this is the most appropriate measure of progress toward complete satisfaction of the performance obligation.

Variable consideration

The Company only offers an assurance-type warranty with regard to the intended functionality of products sold, which does not represent a distinct performance obligation within the context of the contract. Product returns and refunds are generally not material and are not accepted unless the item is defective as manufactured. Estimated product returns are recorded as a reduction in reported revenues at the time of sale based upon historical product return experience and is adjusted for known trends to arrive at the amount of consideration to which Valvoline expects to receive.

The nature of Valvoline's contracts with customers often give rise to variable consideration consisting primarily of promotional rebates and customer pricing discounts based on achieving certain levels of sales activity that generally decrease the transaction price. The Company determines the transaction price as the amount of consideration it expects to be entitled to in exchange for fulfilling the performance obligations, including the effects of any variable consideration, or amounts payable to the customer when there is a basis to reasonably estimate the amount and it is probable there will not be a significant reversal. Variable consideration is recorded as a reduction of the transaction price at the time of sale and is primarily estimated utilizing the most likely amount method that is expected to be earned as the Company is able to estimate the anticipated discounts within a sufficiently narrow range of possible outcomes based on its extensive historical experience with certain customers, similar programs and management's judgment with respect to estimating customer participation and performance levels. Variable consideration is reassessed at each reporting date and adjustments are made, when necessary.

The reduction of transaction price due to customer incentives was \$332 million, \$346 million, and \$357 million in the Consolidated Statements of Comprehensive Income for the years ended September 30, 2020, 2019, and 2018, respectively. Reserves for these customer programs and incentives were \$64 million and \$72 million as of September 30, 2020 and 2019, respectively, and are recorded within Accrued expenses and other liabilities in the Consolidated Balance Sheets.

Allocation of transaction price

In each contract with multiple performance obligations, Valvoline allocates the transaction price, including variable consideration, to each performance obligation on a relative standalone selling price basis, which is generally determined based on the directly observable data of the Company's standalone sales of the performance obligations in similar circumstances to similar customers. In the absence of directly observable standalone prices, the Company may utilize prices charged by competitors selling similar products or use an expected cost-plus margin approach. The amount allocated to each performance obligation is recognized as revenue as control is transferred to the customer.

Policy elections

- **Sales and use-based taxes** - The Company excludes taxes collected from customers from sales. These amounts are, however, reflected in accrued expenses until remitted to the appropriate governmental authority.
- **Shipping and handling costs** - Valvoline elected to account for shipping and handling activities that occur after the customer has obtained control as fulfillment activities (i.e., an expense) rather than as a performance obligation. Accordingly, amounts billed for shipping and handling are a component of the transaction price included in net sales, while costs incurred are included in cost of sales. Shipping and handling costs recorded in sales were \$9 million in fiscal 2020 and \$10 million both fiscal 2019 and 2018.
- **Significant financing component** - Valvoline does not adjust the promised amount of consideration for the effects of a significant financing component as the period between transfer of a promised product or service to a customer and when the customer pays for that product or service is expected to be one year or less.
- **Remaining performance obligations** - The Company elected to omit disclosures of remaining performance obligations for contracts which have an initial expected term of one year or less. In addition, the Company has elected to not disclose remaining performance obligations for its franchise agreements with variable consideration based on service center store sales.
- **Incremental costs of obtaining a contract** - The Company expenses incremental direct costs of obtaining a contract, primarily sales commissions, when incurred due to the short-term nature of individual contracts, which would result in amortization periods of one year or less. These costs are not material and are recorded in Selling, general and administrative expenses within the Consolidated Statements of Comprehensive Income.

Expense recognition

Cost of sales are expensed as incurred and include material and production costs, as well as the costs of inbound and outbound freight, purchasing and receiving, inspection, warehousing, and all other distribution network costs. Selling, general and administrative expenses are expensed as incurred and include sales and marketing costs, research and development costs, advertising, customer support, and administrative costs. Advertising costs were \$72 million in fiscal 2020, \$73 million in fiscal 2019 and \$63 million in fiscal 2018, and research and development costs were \$13 million in both fiscal 2020 and 2019 and \$14 million in fiscal 2018.

Stock-based compensation

Stock-based compensation expense is recognized within Selling, general and administrative expense in the Consolidated Statements of Comprehensive Income and is principally based on the grant date fair value of new or modified awards over the requisite vesting period. The Company's outstanding stock-based compensation awards are primarily classified as equity, with certain liability-classified awards based on award terms and conditions. Valvoline accounts for forfeitures when they occur.

Restructuring

The timing of recognition and related measurement of an employee termination benefit liability associated with a non-recurring benefit arrangement depends on whether employees are required to render service beyond a minimum retention period until they are terminated in order to receive the termination benefits. For employees who are not required to render service until they are terminated or provide service beyond the minimum retention period in order to receive the termination benefits, the Company records a liability for the termination benefits at the communication date. If employees are required to render service beyond the minimum retention period until they are terminated in order to receive the termination benefits, the Company measures the liability for termination benefits at the communication date and recognizes the expense and liability ratably over the future service period.

Income taxes

Income tax expense is provided based on income before income taxes. The Company estimates its tax expense based on current tax laws in the statutory jurisdictions in which it operates. These estimates include judgments about the recognition and realization of deferred tax assets and liabilities resulting from the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement carrying amounts and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to be recovered or settled. As changes in tax laws or rates occur, deferred tax assets and liabilities are adjusted in the period changes are enacted through income tax expense. Valvoline records valuation allowances related to its deferred income tax assets when it is more likely than not that some portion or all of the deferred income tax assets will not be realized.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being sustained upon examination by authorities. Interest and penalties related to unrecognized tax benefits are recognized as part of the provision for income taxes and are accrued beginning in the period that such interest and penalties would be applicable under relevant tax law and until such time that the related tax benefits are recognized. Interest and penalties were not material to any of the periods presented herein.

Derivatives

Valvoline's derivative instruments consist of currency exchange and interest rate swap agreements. The Company's currency exchange contracts are not designated as hedging instruments and are accounted for as either assets or liabilities in the Consolidated Balance Sheets at fair value with the resulting gains or losses recognized as adjustments to earnings. The Company classifies its cash flows related to currency exchange contracts as investing activities in the Consolidated Statements of Cash Flows.

Valvoline's interest rate swap agreements qualify and are designated as cash flow hedges. To the extent the hedging relationship is highly effective, the gain or loss on the swap is recorded in the Consolidated Statements of Comprehensive Income in Other comprehensive income and reclassified into Interest expense in the same period during which the hedged transactions affect earnings. Effectiveness of the cash flow hedges is assessed at inception and quarterly thereafter. The Company classifies its cash flows related to interest rate swap agreements as operating activities in the Consolidated Statements of Cash Flows.

The fair values of the interest rate swaps are reflected as an asset or liability in the Consolidated Balance Sheets and the change in fair value is reported in Accumulated other comprehensive income. The fair values of the interest rate swaps are estimated as the net present value of projected cash flows based upon forward interest rates at the balance sheet date. The Company does not offset fair value amounts recognized for derivative instruments in its balance sheet for presentation purposes.

The interest rate swap agreements effectively modify the Company's exposure to interest rate risk by converting the Company's floating rate debt to a fixed rate basis for the term of the swap agreements, thus reducing the impact of interest rate changes on future interest expense. These agreements involve the receipt of floating rate amounts in exchange for fixed rate interest payments over the life of the agreement without an exchange of the underlying principal amount.

Fair value measurements

Fair value is defined as an exit price, representing an amount that would be received to sell an asset or the amount paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance prioritizes the inputs used to measure fair value into the following three-tier fair value hierarchy for which an instrument's classification within the fair value hierarchy is based upon the lowest level of input that is significant to the instrument's fair value measurement:

- Level 1 - Observable inputs such as unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 - Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.
- Level 3 - Unobservable inputs for the asset or liability for which there is little, if any, market activity at the measurement date. Unobservable inputs reflect the Valvoline's assumptions about what market participants would use to price the asset or liability. The inputs are developed based on the best information available in the circumstances, which may include the Company's own financial data, such as internally developed pricing models, DCF methodologies, as well as instruments for which the fair value determination requires significant management judgment.

Certain investments which measure fair value using the net asset value ("NAV") per share practical expedient are not classified within the fair value hierarchy and are separately disclosed.

Valvoline measures its financial assets and financial liabilities at fair value based on one or more of the following three valuation techniques:

- Market approach: Prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities
- Cost approach: Amount that would be required to replace the service capacity of an asset (replacement cost)
- Income approach: Techniques to convert future amounts to a single present amount based upon market expectations (including present value techniques, option pricing and excess earnings models)

The Company generally uses a market approach, when practicable, in valuing financial instruments. In certain instances, when observable market data is lacking, the Company uses valuation techniques consistent with the income approach whereby future cash flows are converted to a single discounted amount. The Company uses multiple sources of pricing as well as trading and other market data in its process of reporting fair values.

The fair values of accounts receivables and accounts payable approximate their carrying values due to the relatively short-term nature of the instruments. Valvoline's notes receivable primarily consist of variable-rate interest term loans extended to franchisees to provide financial assistance as a response to the COVID-19 pandemic. These notes bear interest comparable with the market rates within Valvoline's variable rate borrowings, and accordingly, their carrying amounts approximate fair value.

The methods described above may produce a fair value that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement.

Currency translation

Operations outside the United States are measured primarily using the local currency as the functional currency. Upon consolidation, the results of operations of the subsidiaries and affiliates whose functional currency is other than the U.S. dollar are translated into U.S. dollars at the average exchange rates for the year while assets and liabilities are translated at year-end exchange rates. Adjustments to translate assets and liabilities into U.S. dollars are recorded in the stockholders' equity section of the Consolidated Balance Sheets as a component of Accumulated other comprehensive income and are included in net earnings only upon sale or substantial liquidation of the underlying non-U.S. subsidiary or affiliated company.

Earnings per share

Basic earnings per share ("EPS") is calculated by dividing net income by the weighted-average number of common shares outstanding during the reported period. Diluted EPS is calculated similar to basic EPS, except that the weighted-average number of shares outstanding includes the number of shares that would have been outstanding had potentially dilutive common shares been issued. Potentially dilutive securities include stock appreciation rights and nonvested stock-based awards. Nonvested market and performance-based share awards are included in the weighted-average diluted shares outstanding each period if established market or performance criteria have been met at the end of the respective periods.

Recent accounting pronouncements

The following standards relevant to Valvoline were either issued or adopted in the current year, or are expected to have a meaningful impact on Valvoline in future periods.

Recently adopted

During fiscal 2020, Valvoline adopted the following:

- In February 2016, the Financial Accounting Standards Board ("FASB") issued accounting guidance, which outlined a comprehensive lease accounting model that requires lessees to recognize a right-of-use asset and a corresponding lease liability on the balance sheet and superseded previous lease accounting guidance. Valvoline adopted this new lease accounting guidance on October 1, 2019 using the optional transition approach. Under this approach, the new lease accounting guidance has been applied prospectively from the date of adoption, while prior period financial statements continue to be reported in accordance with the previous guidance. Lease expense is recognized similar to prior accounting guidance with operating leases resulting in straight-line expense and finance leases resulting in accelerated expense recognition similar to the prior accounting for capital leases. The accounting for lessor arrangements is not significantly changed by the new guidance.

Valvoline elected certain practical expedients permitted by the new guidance, including the package of practical expedients that allows for previous accounting conclusions regarding lease identification and classification to be carried forward for leases which commenced prior to adoption. The Company did not elect the hindsight practical or short-term lease practical expedients.

As a result of adoption, the Company recognized operating lease assets and liabilities inclusive of a reclassified build-to-suit arrangement, derecognized assets and liabilities related to the build-to-suit arrangement, and carried forward existing capital leases as finance lease assets and liabilities. This resulted in a material impact on the Consolidated Balance Sheet and the recognition of total incremental lease assets, inclusive of prepaid lease balances and deferred rent liabilities, of \$219 million and incremental lease liabilities of \$214 million, with an immaterial cumulative effect adjustment to reduce Retained deficit as a result of the build-to-suit lease transition requirements. The impact of adoption was not material to the Consolidated Statements of Comprehensive Income, Cash Flows, or Stockholders' Deficit, and did not impact the Company's compliance with any of its existing debt covenants. Refer to Note 3 for additional information regarding Valvoline's adoption of this new guidance.

- In August 2017, the FASB issued accounting guidance, which reduced the complexity of and simplified the application of hedge accounting. The guidance refines and expands hedge accounting for both financial and nonfinancial risk components, eliminates the need to separately measure and report hedge ineffectiveness,

and aligns the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The guidance also eases documentation and assessment requirements and modifies certain disclosure requirements. This guidance did not have a material impact on the Company's consolidated financial statements in the twelve months ended September 30, 2020 as Valvoline did not have any existing hedging relationships at adoption on October 1, 2019. Refer to Note 4 for additional information regarding the interest rate swap agreements the Company entered into during the third and fourth quarters of fiscal 2020.

- In March 2020, the SEC adopted amendments that reduce and simplify the financial disclosure requirements applicable to registered debt offerings for guarantors and issuers of guaranteed securities, as well for affiliates whose securities collateralize a registrant's securities. The amendments allow for abbreviated financial and non-financial disclosures subject to meeting certain criteria, and reduce the burden of providing consolidating financial information that includes separate columnar information about the issuers and guarantors, including other subsidiaries of the parent company on a consolidated basis, consolidating adjustments and the total consolidated amounts. Valvoline adopted this guidance in the fourth quarter of fiscal 2020 and accordingly, condensed consolidating financial statements are no longer required to be disclosed.

Issued but not yet adopted

- In June 2016, the FASB issued updated guidance that introduces a forward-looking approach based on expected losses, rather than incurred losses, to estimate credit losses on certain types of financial instruments including trade and other receivables. The new guidance requires entities to incorporate historical, current, and forecasted information into their estimates of expected credit losses. This guidance also includes expanded disclosure requirements about significant estimates and credit quality and became effective for Valvoline on October 1, 2020. The Company has substantially completed its assessment and implementation efforts, including developing models to estimate expected credit losses, assessing appropriate assumptions, designing changes to its related processes, and evaluating the effects on the consolidated financial statements, which have been determined to not be material. The Company evaluates creditworthiness when negotiating contracts, and as the Company's receivables are generally short-term in nature, the timing and amount of credit loss recognized under existing guidance and the new guidance does not differ materially.
- In March 2020, the FASB issued guidance regarding the effects of reference rate reform on financial reporting. This guidance provides temporary optional expedients and exceptions to accounting guidance for certain contract modifications and hedging arrangements to ease financial reporting burdens as the market transitions from the London Interbank Offered Rate ("LIBOR") and other interbank reference rates to alternative reference rates. The guidance is available for prospective application upon its issuance and can generally be applied to contract modifications and hedging relationships entered into through December 31, 2022. The Company has interest rate swap hedging arrangements and long-term debt as described in Notes 4 and 9 to the Consolidated Financial Statements, respectively, for which existing payments are based on LIBOR. The Company anticipates that it will utilize amendments to its existing debt and interest rate swap agreements that will allow modification of the reference rates without the application of contract modification accounting guidance. The Company will adopt the guidance when LIBOR is discontinued or earlier depending on when amendments to its current agreements are initiated. Currently, the Company does not expect the adoption of this guidance to have material impact on its consolidated financial statements.

The FASB issued other accounting guidance during the period that is not currently applicable or not expected to have a material impact on Valvoline's financial statements, and therefore, is not described above.

NOTE 3 – LEASE COMMITMENTS

As described in Note 2, Valvoline adopted new lease accounting guidance effective October 1, 2019 and changed its policy for lease accounting prospectively for lease agreements entered into or reassessed from the date of adoption as described herein.

The following table presents the Company's lease balances:

(In millions)	Location in Consolidated Balance Sheets	September 30, 2020
Assets		
Operating lease assets	Operating lease assets	\$ 261
Finance lease assets	Property, plant and equipment, net	77
Amortization of finance lease assets	Property, plant and equipment, net	(10)
Total leased assets		\$ 328
Liabilities		
Current:		
Operating lease liabilities	Accrued expenses and other liabilities	\$ 33
Finance lease liabilities	Accrued expenses and other liabilities	3
Noncurrent:		
Operating lease liabilities	Operating lease liabilities	231
Finance lease liabilities	Other noncurrent liabilities	70
Total lease liabilities		\$ 337

The following table presents the components of total lease costs:

(In millions)	Location in Consolidated Statements of Comprehensive Income	Year ended September 30, 2020
Operating lease cost	Cost of sales and Selling, general and administrative expenses ^(a)	\$ 45
Finance lease costs		
Amortization of lease assets	Cost of sales ^(a)	4
Interest on lease liabilities	Net interest and other financing expenses	3
Variable lease cost	Cost of sales and Selling, general and administrative expenses ^(a)	6
Sublease income	Equity and other income, net	(6)
Total lease cost		\$ 52

(a) Supply chain and retail-related amounts are included in Cost of sales.

Other information related to the Company's leases follows:

(In millions)	Year ended September 30, 2020	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases ^(a)	\$	43
Operating cash flows from finance leases	\$	4
Financing cash flows from finance leases	\$	1
Lease assets obtained in exchange for lease obligations:		
Operating leases	\$	49
Finance leases	\$	49

(a) Included within the change in Other assets and liabilities within the Consolidated Statement of Cash Flows offset by noncash operating lease asset amortization and liability accretion.

The following table reconciles the undiscounted cash flows for the next five fiscal years ended September 30 and thereafter to the operating and finance lease liabilities recorded within the Consolidated Balance Sheet as of September 30, 2020:

(In millions)	Operating leases	Finance leases
2021	\$ 43	\$ 8
2022	40	8
2023	37	8
2024	32	8
2025	29	8
Thereafter	142	68
Total future lease payments	323	108
Imputed interest	59	35
Present value of lease liabilities	\$ 264	\$ 73

As of September 30, 2020, Valvoline has additional leases primarily related to its quick lube service center stores that have not yet commenced with approximately \$59 million in undiscounted future lease payments that are not included in the table above. These leases are expected to commence over the next twelve months and generally have lease terms of 15 years.

In accordance with the previous lease accounting guidance, Valvoline's lease arrangements were previously classified as either capital, operating, or financing obligations. Previously classified capital leases are now considered finance leases under the new lease accounting guidance, while previous financing obligations have been derecognized and reclassified as operating leases. The classification of operating leases remains substantially unchanged under the new lease accounting guidance.

The future minimum lease payments by fiscal year as determined prior to the adoption of the new lease accounting guidance under the previously designated capital, financing and operating leases as of the fiscal year ended September 30, 2019, were as follows:

(In millions)	Operating leases	Capital leases and financing obligations
2020	\$ 36	\$ 6
2021	32	7
2022	29	7
2023	27	7
2024	23	7
Thereafter	120	50
Total future minimum lease payments ^(a)	<u>\$ 267</u>	<u>84</u>
Imputed interest		29
Present value of minimum lease payments		<u>\$ 55</u>

(a) Future lease payments do not include fixed payments for executory costs, such as taxes, insurance, maintenance and operating expenses.

The following table presents the weighted average remaining lease term and interest rate as of September 30, 2020:

	Operating leases	Finance leases
Weighted average remaining lease term (in years)	9.5 years	13.3 years
Weighted average discount rate	4.08 %	6.99 %

NOTE 4 – FAIR VALUE MEASUREMENTS

Recurring fair value measurements

The following table sets forth the Company's financial assets and liabilities accounted for at fair value on a recurring basis by level within the fair value hierarchy as of September 30:

(In millions)	Fair value hierarchy	2020	2019
Cash and cash equivalents			
Money market funds	Level 1	\$ 296	\$ —
Time deposits	Level 2	139	59
Prepaid expenses and other current assets			
Currency derivatives	Level 2	3	—
Other noncurrent assets			
Non-qualified trust funds	Level 2	8	16
Non-qualified trust funds	NAV ^(a)	8	4
Total assets at fair value		\$ 454	\$ 79
Accrued expenses and other liabilities			
Currency derivatives	Level 2	\$ 2	\$ —
Interest rate swap agreements	Level 2	1	—
Other noncurrent liabilities			
Deferred compensation obligations	NAV ^(a)	25	20
Total liabilities at fair value		\$ 28	\$ 20

(a) Funds measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

Money market funds

Money market funds trade in an active market and are valued using quoted market prices, which are Level 1 inputs.

Time deposits

Time deposits are balances held with financial institutions at face value plus accrued interest, which approximates fair value and are categorized as Level 2.

Currency derivatives

The Company uses derivatives not designated as hedging instruments consisting of forward contracts to manage non-U.S. currency denominated balance sheet exposures and exchange one currency for another at a fixed rate on a future date of one year or less. The Company had outstanding contracts with notional values of \$149 million and \$111 million as of September 30, 2020 and 2019, respectively. The fair value of these outstanding contracts are recorded as assets and liabilities on a gross basis measured using readily observable market inputs to estimate the fair value for similar derivative instruments and are classified as Level 2. Valvoline has entered into arrangements to mitigate losses in the event of nonperformance by counterparties that allow settlement on a net basis, the effect of which was not material to the recorded assets and liabilities as of September 30, 2020 or 2019.

Gains and losses on these instruments are recognized in Selling, general and administrative expenses in the Consolidated Statements of Comprehensive Income as exchange rates change the fair value of these instruments and upon settlement to offset the remeasurement gain or loss on the related currency-denominated exposures in the same period. Gains and losses recognized related to these instruments were not material in any period presented herein.

Non-qualified trust funds

The Company maintains a non-qualified trust that is restricted to fund benefit payments for certain of its U.S. non-qualified pension plans. This trust is primarily invested in fixed income U.S. government bonds and mutual funds that are measured at fair value based upon Level 2 inputs corroborated by observable market data and using the NAV per share practical expedient, respectively. There were no significant redemption restrictions or unfunded commitments on these mutual fund investments as of September 30, 2020. Gains and losses related to these investments are immediately recognized within Selling, general and administrative expenses in the Consolidated Statements of Comprehensive Income and were not material in any period presented herein.

Interest rate swap agreements

In the third and fourth quarters of fiscal 2020, the Company entered into four interest rate swap agreements with three to four year maturities to exchange interest rate payments on \$350 million of variable rate term loan borrowings to fixed interest rates. The interest rate swap agreements had fair values of zero at inception and have been designated as cash flow hedges with the unrealized gains or losses recorded in Accumulated other comprehensive income and reclassified into earnings within Net interest and other financing expenses as the underlying payments occur. The Company expects these hedges to be highly effective and based on interest rates as of September 30, 2020, estimates that there will not be material reclassifications into earnings over the next twelve months.

The fair value of interest rate swap agreements represents the difference in the present value of cash flows calculated at the contracted interest rates and at current market interest rates at the end of the period. The Company utilizes Level 2 observable inputs such as interest rate yield curves to estimate fair value for the interest rate swap agreements.

Deferred compensation obligations

The Company has an unfunded deferred compensation plan that is valued based on the underlying participant-directed investments. The fair value of underlying investments in collective trust funds is determined using the NAV provided by the administrator of the fund as a practical expedient. The NAV is determined by each fund's trustee based upon the fair value of the underlying assets owned by the fund, less its liabilities, divided by outstanding units. There were no significant redemption restrictions or unfunded commitments on these investments as of September 30, 2020. Changes in the fair values are recognized in the Consolidated Statements of Comprehensive Income within Selling, general and administrative expenses and were not material for the periods presented herein.

Fair value of long-term debt

The fair values of the Company's outstanding fixed rate senior notes shown in the table below are based on recent trading values, which are considered Level 2 inputs within the fair value hierarchy. Long-term debt is included in the Consolidated Balance Sheets at carrying value, rather than fair value, and is therefore excluded from the fair value table above. Carrying values shown in the following table are net of unamortized discounts and issuance costs.

(In millions)	September 30, 2020			September 30, 2019		
	Fair value	Carrying value	Unamortized discount and issuance costs	Fair value	Carrying value	Unamortized discount and issuance costs
2024 Notes	\$ —	\$ —	\$ —	\$ 390	\$ 371	\$ (4)
2025 Notes	827	790	(10)	407	395	(5)
2030 Notes	613	592	(8)	—	—	—
Total	\$ 1,440	\$ 1,382	\$ (18)	\$ 797	\$ 766	\$ (9)

Refer to Note 9 for details of these notes as well as Valvoline's other debt instruments that have variable interest rates with carrying amounts that approximate fair value.

NOTE 5 – ACQUISITIONS AND DIVESTITURES

Acquisitions

Fiscal 2020 acquisitions

During fiscal 2020, Valvoline acquired 35 service center stores in single and multi-store transactions, including 23 former franchise service center stores, for an aggregate purchase price of \$40 million within the Quick Lubes reportable segment. These acquisitions provide an opportunity to expand Valvoline's Quick Lubes system within key markets.

Fiscal 2019 acquisitions

Valvoline acquired 60 service center stores and a lubricant production company during fiscal 2019 for an aggregate purchase price of \$78 million. These acquisitions included 31 franchise service center stores in Canada acquired from Oil Changers Inc. on October 31, 2018, five former franchise service center stores, and 24 service center stores acquired in single and multi-store transactions within the Quick Lubes reportable segment. The Company also acquired an Eastern European lubricant production company, including its manufacturing facility, within the International reportable segment. These acquisitions provided an opportunity to grow Valvoline's Quick Lubes system within key markets and expand Valvoline's presence in Eastern Europe, including the Company's regional supply chain capabilities.

Fiscal 2018 acquisitions

During fiscal 2018, the Company acquired 136 service center stores for an aggregate purchase price of \$125 million within the Quick Lubes reportable segment. These acquisitions included 56 former franchise service center stores acquired from Henley Bluewater LLC for \$60 million on October 2, 2017 and 73 franchise service center stores acquired from Great Canadian Oil Change Ltd. for \$53 million on July 13, 2018. Fiscal 2018 acquisitions also included four former franchise service center stores and three service center stores acquired in single and multi-store transactions.

Summary

The following table summarizes the aggregate cash consideration paid and the total assets acquired and liabilities assumed for the years ended September 30:

(In millions)	2020	2019	2018
Inventories	\$ 1	\$ —	\$ 2
Other current assets	—	—	1
Property, plant and equipment	6	19	2
Operating lease assets	1	—	—
Goodwill ^(a)	17	50	58
Intangible assets ^(b)			
Reacquired franchise rights ^{(a) (c)}	20	5	26
Customer relationships	—	6	9
Trademarks and trade names	—	1	27
Other	—	2	—
Other current liabilities	(1)	—	—
Other noncurrent liabilities	(4)	(1)	—
Net assets acquired	40	82	125
Bargain purchase gain ^(d)	—	(4)	—
Consideration transferred	\$ 40	\$ 78	\$ 125

(a) Goodwill is generally expected to be deductible for income tax purposes.

(b) Weighted average amortization period of intangible assets acquired in fiscal 2020 is 10 years.

- (c) Prior to the acquisition of former franchise service center stores, Valvoline licensed the right to operate franchised quick lube service centers, including use of the Company's trademarks and trade name. In connection with these acquisitions, Valvoline reacquired those rights and recognized separate definite-lived reacquired franchise rights intangible assets, which are being amortized on a straight-line basis over the weighted average remaining term of approximately 10 years for the rights reacquired in fiscal 2020. The effective settlement of these arrangements resulted in no settlement gain or loss as the contractual terms were at market.
- (d) Recorded in Equity and other income, net within the Consolidated Statement of Comprehensive Income.

The fair values above are preliminary for up to one year from the date of acquisition as they are subject to measurement period adjustments as new information is obtained about facts and circumstances that existed as of the acquisition date. The Company does not expect any material changes to the preliminary purchase price allocations summarized above for acquisitions completed during the last twelve months.

Dispositions

Valvoline sold six service center stores to a franchisee within the Quick Lubes reportable segment and completed the liquidation of certain subsidiaries during fiscal 2020. Valvoline liquidated one of its subsidiaries in fiscal 2019, and in fiscal 2018, sold two service center stores to a franchisee within the Quick Lubes reportable segment and completed the liquidation of a subsidiary within the International reportable segment. These transactions resulted in a \$1 million loss in fiscal 2020, a \$1 million gain in fiscal 2019, and a \$2 million net gain in fiscal 2018, each of which were reported in Equity and other income, net in the Consolidated Statements of Comprehensive Income.

Remaining ownership interest in subsidiary

During fiscal 2018, Valvoline purchased the remaining 30% interest in its Thailand subsidiary for total consideration of approximately \$16 million. This purchase eliminated the immaterial noncontrolling interest and made the subsidiary wholly-owned.

NOTE 6 – EQUITY METHOD INVESTMENTS

Valvoline has a strategic relationship with Cummins, Inc. ("Cummins"), a leading supplier of engines and related component products, which includes co-branding products for heavy duty consumers and a 50% interest in joint ventures in India, China, and Argentina. Valvoline also has joint ventures with other partners in Latin America, China and the U.S. Valvoline's investments in these unconsolidated affiliates were \$44 million and \$34 million as of September 30, 2020 and 2019, respectively.

Valvoline's stockholders' deficit included \$39 million and \$32 million of undistributed earnings from affiliates accounted for under the equity method as of September 30, 2020 and 2019, respectively. Summarized financial information for Valvoline's equity method investments follows as of and for the years ended September 30:

(In millions)	2020	2019
Financial position		
Current assets	\$ 143	\$ 123
Current liabilities	(75)	(77)
Working capital	68	46
Noncurrent assets	26	23
Noncurrent liabilities	(8)	(2)
Stockholders' equity	\$ 86	\$ 67

(In millions)	2020	2019	2018
Results of operations			
Sales	\$ 273	\$ 309	\$ 313
Income from operations	\$ 50	\$ 59	\$ 62
Net income	\$ 25	\$ 24	\$ 27

The Company's transactions with affiliate companies accounted for under the equity method were as follows for the years ended September 30:

(In millions)	2020		2019		2018	
Equity income ^(a)	\$	12	\$	12	\$	14
Distributions received	\$	5	\$	9	\$	10
Royalty income ^(a)	\$	8	\$	9	\$	8
Sales to	\$	7	\$	12	\$	12
Purchases from	\$	7	\$	4	\$	2

(a) Equity and royalty income from affiliates accounted for under the equity method of accounting are recognized in Equity and other income, net in the Consolidated Statements of Comprehensive Income and are primarily related to the International reportable segment.

Transactions with affiliate companies accounted for under the equity method resulted in the following balances on the Consolidated Balance Sheets as of September 30:

(In millions)	2020		2019	
Accounts receivable ^(a)	\$	4	\$	6
Notes receivable ^(b)	\$	5	\$	2
Trade and other payables	\$	1	\$	—

(a) Included in Receivables, net within the Consolidated Balance Sheets.

(b) Included in Other noncurrent assets within the Consolidated Balance Sheets.

NOTE 7 – INTANGIBLE ASSETS

Goodwill

The following summarizes the changes in the carrying amount of goodwill for each reportable segment and in total during fiscal 2020 and 2019:

(In millions)	Quick Lubes	Core North America	International	Total
Balance at September 30, 2018	\$ 252	\$ 89	\$ 40	\$ 381
Acquisitions	50	—	—	50
Currency translation	(1)	—	—	(1)
Balance at September 30, 2019	301	89	40	430
Acquisitions	17	—	—	17
Currency translation	1	—	—	1
Dispositions ^(a)	(3)	—	—	(3)
Balance at September 30, 2020	\$ 316	\$ 89	\$ 40	\$ 445

(a) Activity associated with the derecognition of goodwill as the result of the sale and disposal of six service center stores. Refer to Note 5 for details regarding the disposition.

Other intangible assets

Valvoline's purchased intangible assets were specifically identified when acquired, have finite lives, and are reported in Goodwill and intangibles, net on the Consolidated Balance Sheets. The following summarizes the gross carrying amounts and accumulated amortization of the Company's intangible assets as of September 30:

(In millions)	2020			2019		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Definite-lived intangible assets						
Trademarks and trade names	\$ 30	\$ (6)	\$ 24	\$ 30	\$ (4)	\$ 26
Reacquired franchise rights	57	(14)	43	37	(8)	29
Customer relationships	22	(7)	15	22	(5)	17
Other intangible assets	3	(1)	2	3	(1)	2
Total definite-lived intangible assets	\$ 112	\$ (28)	\$ 84	\$ 92	\$ (18)	\$ 74

The table that follows summarizes amortization expense (actual and estimated) for intangible assets, assuming no additional amortizable intangible assets, for the years ended September 30:

(In millions)	Actual		Estimated			
	2020	2021	2022	2023	2024	2025
Amortization expense	\$ 10	\$ 11	\$ 11	\$ 10	\$ 9	\$ 7

NOTE 8 - RESTRUCTURING ACTIVITIES

During the second fiscal quarter of 2019, Valvoline outlined a broad-based restructuring and cost-savings program to reduce costs, simplify processes and focus the organization's structure and resources on key growth initiatives. Part of this program included employee separation actions, which were generally completed during fiscal 2019, with the associated termination benefits substantially paid by the end of fiscal 2020.

Since program inception, Valvoline has recognized cumulative costs of \$12 million that were primarily recognized during the year ended September 30, 2019. These costs were for employee termination benefits, which included severance and other benefits provided to employees pursuant to the restructuring program. These expenses were recognized in Selling, general and administrative expenses within the Consolidated Statements of Comprehensive Income. The Company does not expect to incur significant remaining costs from these actions.

The results by segment, as disclosed in Note 16, do not include these restructuring expenses, which is consistent with the manner by which management assesses the performance and evaluates the results of each segment. Accordingly, these expenses are included in Unallocated and other.

Activity related to this program is reported primarily within Accrued expenses and other liabilities in the Consolidated Balance Sheets and is summarized as follows:

(In millions)	Employee Termination Benefits
Balance at September 30, 2018	\$ —
Expenses recognized during the period	13
Payments	(3)
Changes in estimates ^(a)	(1)
Balance at September 30, 2019	9
Expenses recognized during the period	1
Payments	(8)
Changes in estimates ^(a)	(1)
Balance at September 30, 2020	\$ 1

(a) Changes in estimate of previously-recognized expenses relate to lower-than-expected termination benefit costs.

NOTE 9 – DEBT

The following table summarizes Valvoline's debt as of September 30:

(In millions)	2020	2019
2030 Notes	\$ 600	\$ —
2025 Notes	800	400
2024 Notes	—	375
Term Loan	475	575
Trade Receivables Facility	88	—
China Credit Facility	18	—
Other ^(a)	—	1
Debt issuance costs and discounts	(19)	(9)
Total debt	\$ 1,962	\$ 1,342
Current portion of long-term debt	—	15
Long-term debt	\$ 1,962	\$ 1,327

(a) Other includes debt acquired through acquisitions.

Senior Notes

The Company's outstanding fixed rate senior notes as of September 30, 2020 consist of 4.375% senior unsecured notes due 2025 with an aggregate principal amount of \$800 million (the "2025 Notes") and 4.250% senior unsecured notes due 2030 with an aggregate principal amount of \$600 million (the "2030 Notes," and collectively with the 2025 Notes, the "Senior Notes"). The Senior Notes are subject to customary events of default for similar debt securities, which if triggered may accelerate payment of principal, premium, if any, and accrued but unpaid interest. Such events of default include non-payment of principal and interest, non-performance of covenants and obligations, default on other material debt, and bankruptcy or insolvency. If a change of control repurchase event occurs, Valvoline may be required to offer to purchase the Senior Notes from the holders thereof. The Senior Notes are not otherwise required to be repaid prior to maturity, although they may be redeemed at the option of Valvoline at any time prior to maturity in the manner specified in the governing indentures. The Senior Notes are guaranteed by each of Valvoline's subsidiaries that guarantee obligations under its Senior Credit Agreement.

2025 Notes

The 2025 Notes are comprised of two issuances of 4.375% senior unsecured notes due 2025 each with an aggregate principal amount of \$400 million, one issuance that was completed in August 2017 (the "Existing 2025 Notes") and the other that was completed in May 2020 (the "Additional 2025 Notes"). The net proceeds from the issuance of the Existing 2025 Notes were \$394 million (after deducting initial purchasers' discounts and debt issuance costs) and were used to make a voluntary contribution to the Company's qualified U.S. pension plan. The Additional 2025 Notes were issued in a private offering at 99.5% of their principal amount, resulting in an original issue discount of \$2 million. The net proceeds from the offering of \$393 million (after deducting initial purchasers' discounts and debt issuance costs), together with cash and cash equivalents on hand, were used to repay \$450 million in borrowings from the revolving credit facility under the Senior Credit Agreement.

The 2025 Notes were registered in exchange offers in which no additional proceeds were received. The exchange offer for the Existing 2025 Notes was completed in December 2017, and the exchange offer for the Additional 2025 Notes was completed in August 2020. The 2025 Notes have substantially similar terms, except for certain transfer restrictions, registration rights and additional interest provisions that apply to the Additional 2025 Notes do not apply to the Existing 2025 Notes.

2030 and 2024 Notes

In February 2020, Valvoline issued the 2030 Notes in a private offering for net proceeds of \$592 million (after deducting initial purchasers' discounts and debt issuance costs). A portion of the net proceeds were used to redeem in full Valvoline's 5.500% senior unsecured notes due 2024 at the aggregate principal amount of \$375 million (the "2024 Notes"), plus an early redemption premium of \$15 million, accrued and unpaid interest, as well as related fees and expenses for an aggregate redemption price of \$394 million. A loss on extinguishment of the 2024 Notes of \$19 million was recognized in Net interest and other financing expenses in the Consolidated Statements of Comprehensive Income during the year ended September 30, 2020, comprised of the early redemption premium and the write-off of related unamortized debt issuance costs and discounts.

A portion of the net proceeds from the offering of the 2030 Notes were also utilized to prepay \$100 million of indebtedness from the Company's term loan facility under the Senior Credit Agreement, with the remainder of the net proceeds to be used for general corporate purposes, which may include acquisitions, repayment of indebtedness, working capital, and capital expenditures. In response to the COVID-19 pandemic, the Company has utilized the remaining net proceeds in fiscal 2020 to preserve cash and cash equivalents and maintain liquidity.

Senior Credit Agreement

Key terms and conditions

The Senior Credit Agreement, as amended in fiscal 2019, provides an aggregate principal amount of \$1,050 million in senior secured credit facilities, comprised of (i) a five-year \$575 million term loan facility (the "Term Loan") and (ii) a five-year \$475 million revolving credit facility (the "Revolver"), including a \$100 million letter of credit sublimit.

The outstanding principal balance of the Term Loan is required to be repaid in quarterly installments, with the balance due at maturity on April 12, 2024, and prepayment due in the amount of the net cash proceeds from certain events. Amounts outstanding under the Senior Credit Agreement may be prepaid at any time, and from time to time, in whole or part, without premium or penalty. At Valvoline's option, amounts outstanding under the Senior Credit Agreement bear interest at either LIBOR or an alternate base rate, in each case plus the applicable interest rate margin. The interest rate fluctuates between LIBOR plus 1.375% per annum and LIBOR plus 2.000% per annum (or between the alternate base rate plus 0.375% per annum and the alternate base rate plus 1.000% per annum), based upon Valvoline's corporate credit ratings or its consolidated net leverage ratio, whichever yields the lowest rate.

Valvoline's existing and future subsidiaries (other than certain immaterial subsidiaries, joint ventures, special purpose financing subsidiaries, regulated subsidiaries, non-U.S. subsidiaries and certain other subsidiaries) guarantee the Senior Credit Agreement, which is also secured by a first-priority security interest in substantially all the personal property assets and certain real property assets of Valvoline and the guarantors, including all or a portion of the equity interests of certain of Valvoline's domestic subsidiaries and first-tier non-U.S. subsidiaries, and in certain cases, a portion of the equity interests of other non-U.S. subsidiaries.

The Senior Credit Agreement contains usual and customary representations, warranties, events of default, and affirmative and negative covenants, including limitations on liens, additional indebtedness, investments, restricted payments, asset sales, mergers, affiliate transactions and other customary limitations, as well as the maintenance of financial covenants as of the end of each fiscal quarter, including a maximum consolidated net leverage ratio of 4.5 and a minimum consolidated interest coverage ratio of 3.0. As of September 30, 2020, Valvoline was in compliance with all covenants under the Senior Credit Agreement.

Summary of activity

During fiscal 2020, the Company made a principal prepayment of \$100 million on its Term Loan using a portion of the net proceeds from the offering of the 2030 Notes, resulting in an outstanding principal balance of \$475 million as of September 30, 2020 from the \$575 million outstanding as of September 30, 2019. Quarterly principal payments will resume with \$1 million due on June 30, 2022 and \$14 million due each quarter beginning with September 30, 2022 through maturity.

During the year ended September 30, 2020, the Company borrowed and repaid \$450 million from its Revolver. These borrowings under the Revolver were a precautionary measure to further strengthen the Company's liquidity position and provide additional financial flexibility in response to the COVID-19 pandemic and were subsequently repaid using proceeds provided by the offering of the Additional 2025 Notes and cash and cash equivalents that were on hand. As of September 30, 2020 and September 30, 2019 there were no amounts outstanding under the Revolver, and the borrowing capacity remaining as of September 30, 2020 was \$469 million due to a reduction of \$6 million for letters of credit outstanding.

Trade Receivables Facility

Key terms and conditions

In January 2020, the Company amended its \$175 million trade receivables securitization facility (the "Trade Receivables Facility"), which extended the maturity to November 2021. In April 2020, Valvoline further amended the Trade Receivables Facility to modify the eligibility requirements for certain receivables, which had the effect of increasing the Company's remaining eligible borrowing capacity. This amendment also requires the Company to maintain an amount outstanding equal to the lesser of 50 percent of the unchanged total borrowing capacity and the borrowing base from the availability of eligible receivables. Other relevant terms and conditions of Trade Receivables Facility were substantially unchanged under these amendments.

Under the Trade Receivables Facility, Valvoline sells and/or transfers a majority of its U.S. trade receivables to a wholly-owned, bankruptcy-remote subsidiary as they are originated, and advances by the lenders to that subsidiary (in the form of cash or letters of credit) are secured by those trade receivables. Accordingly, the Company accounts for borrowings under the Trade Receivables Facility as secured borrowings. The assets of this financing subsidiary are restricted as collateral for the payment of its obligations under the Trade Receivables Facility, and its assets and credit are not available to satisfy the debts and obligations owed to the creditors of the Company. The Company includes the assets, liabilities and results of operations of this financing subsidiary in its consolidated financial statements.

The financing subsidiary pays customary fees to the lenders, and advances by a lender under the Trade Receivables Facility accrue interest for which the weighted average interest rates were 1.4% and 3.4% for the years ended September 30, 2020 and 2019, respectively. The Trade Receivables Facility contains various customary affirmative and negative covenants and default and termination provisions, which provide for acceleration of amounts owed under the Trade Receivables Facility in circumstances including, but not limited to, the failure to pay interest or other amounts when due, defaults on certain other indebtedness, certain insolvency events, and breach of representation.

Summary of activity

During fiscal 2020, Valvoline borrowed \$90 million under the Trade Receivables Facility to proactively increase its cash position and enhance financial agility in light of the uncertainty resulting from the COVID-19 pandemic. As of September 30, 2020, \$88 million remained outstanding and no amounts were outstanding as of September 30, 2019.

Based on the availability of eligible receivables, the remaining borrowing capacity of the Trade Receivables Facility at September 30, 2020 was \$79 million. The financing subsidiary owned \$267 million and \$259 million of outstanding accounts receivable as of September 30, 2020 and 2019, respectively, and these amounts are included in Receivables, net in the Company's Consolidated Balance Sheets.

China Credit Facility

In May 2020, the Company entered into a five-year credit agreement (the "China Credit Facility") for approximately \$40 million to finance the completion of construction and preparation of the blending and packaging plant in China for production. Borrowings will bear interest at the local prime rate less the applicable interest rate margin, which was 4.35% for the year ended September 30, 2020. The proceeds from the China Credit Facility are restricted for capital expenditures directly related to the construction of and preparation for production of the blending and packaging plant in China, and borrowings are secured by the assets underlying the project. The outstanding balance is required to be repaid in semiannual installments, which total approximately \$2 million in fiscal 2022, \$4 million in fiscal 2023, and \$7 million in fiscal 2024, with the remaining balance due in fiscal 2025. As of September 30, 2020, there was \$18 million outstanding on the China Credit Facility, which had remaining borrowing capacity of approximately \$22 million.

Long-term debt maturities

The future maturities of debt outstanding as of September 30, 2020, excluding debt issuance costs and discounts, are as follows:

(In millions)

Years ending September 30

2021	\$	—
2022		104
2023		61
2024		410
2025		806
Thereafter		600
Total	\$	1,981

NOTE 10 – INCOME TAXES

Components of income tax expense

Income tax expense consisted of the following for the years ended September 30:

(In millions)	2020	2019	2018
Current			
Federal ^(a)	\$ 16	\$ 10	\$ (2)
State	11	5	6
Non-U.S.	15	19	17
	<u>42</u>	<u>34</u>	<u>21</u>
Deferred			
Federal	62	24	136
State	26	—	9
Non-U.S.	4	(1)	—
	<u>92</u>	<u>23</u>	<u>145</u>
Income tax expense	<u>\$ 134</u>	<u>\$ 57</u>	<u>\$ 166</u>

(a) Benefit from favorable settlement with tax authorities in fiscal 2018.

The following table presents pre-tax income and the principal components of the reconciliation between the effective tax rate and the U.S. federal statutory income tax rate in effect for the years ended September 30:

(In millions)	2020	2019	2018
Income before income taxes			
United States	\$ 399	\$ 212	\$ 282
Non-U.S.	52	53	50
Total income before income taxes	<u>\$ 451</u>	<u>\$ 265</u>	<u>\$ 332</u>
<i>U.S. statutory tax rate ^(a)</i>	<i>21.0 %</i>	<i>21.0 %</i>	<i>24.5 %</i>
Income taxes computed at U.S. statutory tax rate	\$ 95	\$ 56	\$ 81
Increase (decrease) in amount computed resulting from:			
Unrecognized tax benefits	1	5	—
State taxes, net of federal benefit	16	9	14
International rate differential	2	2	—
Permanent items	(4)	(3)	(3)
Remeasurement of net deferred taxes ^(b)	1	(4)	73
Return-to-provision adjustments	(2)	(6)	—
Deemed repatriation ^(c)	—	—	4
Change in valuation allowance	29	(4)	1
Tax Matters Agreement activity	(6)	1	(2)
Other	2	1	(2)
Income tax expense	<u>\$ 134</u>	<u>\$ 57</u>	<u>\$ 166</u>
<i>Effective tax rate</i>	<i>29.7 %</i>	<i>21.5 %</i>	<i>50.0 %</i>

(a) As a result of U.S. tax reform legislation which generally became effective January 1, 2018, the federal corporate income tax rate was lowered from 35% to 21%. Based on the effective date of the rate reduction, the Company's federal corporate statutory income tax rate was a blended rate of 24.5% for fiscal 2018.

- (b) The remeasurement of net deferred taxes relates to the enactment and clarification of tax reform legislation. During fiscal 2018, Valvoline recognized \$71 million of income tax expense to remeasure net deferred tax assets at the lower enacted corporate tax rates due to U.S. and Kentucky tax reform legislation.
- (c) Income tax expense recognized related to the deemed repatriation tax on undistributed non-U.S. earnings and profits in connection with the enactment of U.S. tax reform.

Higher income tax expense in fiscal 2020 from the prior year was principally driven by higher pre-tax earnings and income tax expense recognized during the year to establish a \$30 million valuation allowance on certain legacy tax attributes. This increase in expense coupled with prior year benefits from the release of a valuation allowance and the clarification of certain provisions of Kentucky tax reform legislation led to a higher effective tax rate in fiscal 2020.

Deferred taxes

Deferred income taxes are provided for income and expense items recognized in different years for tax and financial reporting purposes. A summary of the deferred tax assets and liabilities included in the Consolidated Balance Sheets follows as of September 30:

(In millions)	2020	2019
Deferred tax assets		
Non-U.S. net operating loss carryforwards ^(a)	\$ 2	\$ 2
State net operating loss carryforwards ^(b)	18	19
Employee benefit obligations	79	98
Compensation accruals	26	21
Credit carryforwards ^(c)	11	19
Operating lease liabilities	69	—
Other	17	23
Valuation allowances ^(d)	(30)	(2)
Net deferred tax assets	192	180
Deferred tax liabilities		
Goodwill and other intangibles	11	9
Property, plant and equipment	75	47
Operating lease assets	67	—
Undistributed earnings	6	2
Total deferred tax liabilities	159	58
Total net deferred tax assets ^(e)	\$ 33	\$ 122

(a) Gross non-U.S. net operating loss carryforwards of \$5 million expire in fiscal years 2023 to 2040.

(b) Apportioned gross state net operating loss carryforwards of \$365 million expire in fiscal years 2023 through 2037.

(c) Credit carryforwards consist primarily of U.S. tax credits that generally expire in fiscal years 2025 through 2036.

(d) Valuation allowances at September 30, 2020 primarily relate to state net operating loss carryforwards and certain other federal legacy tax attributes that are no longer expected to be realized or realizable.

(e) Due to netting of deferred tax assets and liabilities by jurisdiction, a \$1 million net deferred tax liability is included within Other noncurrent liabilities in the Consolidated Balance Sheets as of September 30, 2020 and 2019.

Undistributed earnings

Prior to U.S. tax reform, the Company had not provided for U.S. income taxes on undistributed earnings and other outside basis differences of its non-U.S. subsidiaries as it was the Company's intention for these tax basis differences to remain indefinitely reinvested. Valvoline began to record estimated incremental withholding taxes during fiscal 2018 and account for certain of its non-U.S. subsidiaries as being immediately subject to tax, while certain other outside basis differences restricted by regulations, operational or investing needs for non-U.S. subsidiaries remained indefinitely reinvested. If these outside basis differences were no longer to be indefinitely reinvested in the future, the Company may be subject to additional income and withholding taxes, which are not practicable to estimate.

Tax Matters Agreement

Background

Prior to its initial public offering (the "IPO") in September 2016, the Valvoline business operated as a wholly-owned subsidiary of Ashland Global Holdings Inc. (which together with its predecessors and consolidated subsidiaries is referred to herein as "Ashland"). Valvoline was incorporated in May 2016 and in advance of the IPO, the Valvoline business and certain other legacy Ashland assets and liabilities were transferred from Ashland to Valvoline as a reorganization of entities under common Ashland control (the "Contribution"). In connection with the IPO, Ashland retained 83% of the total outstanding shares of Valvoline's common stock. On May 12, 2017, Ashland distributed its interest in Valvoline to Ashland stockholders through a pro rata dividend on shares of Ashland common stock outstanding (the "Distribution"), which marked the completion of Valvoline's separation from Ashland and Valvoline was no longer a controlled and consolidated subsidiary of Ashland.

Key terms and conditions

An agreement (the "Tax Matters Agreement") was entered into on September 22, 2016 between Valvoline and Ashland, that generally provides that Valvoline is required to indemnify Ashland for the following items:

- The utilization of certain legacy tax attributes transferred from Ashland as the result of the Contribution;
- Taxes for the pre-IPO period that arise on audit or examination and are directly attributable to the Valvoline business;
- Certain U.S. federal, state or local taxes for the pre-IPO period of Ashland and/or its subsidiaries that arise on audit or examination and are not directly attributable to either the Valvoline business or the Ashland chemicals business;
- Taxes of Valvoline for the period between the IPO and Distribution that are not attributable to Ashland Group Returns (as defined below);
- Taxes of Valvoline for all taxable periods that begin on or after the day after the date of the Distribution; and
- Taxes and expenses resulting from the failure of the Contribution or Distribution to qualify for their intended tax-free treatment.

For the periods prior to the Distribution, Valvoline was included in Ashland's consolidated U.S. and state income tax returns and in the income tax returns of certain Ashland international subsidiaries (collectively, the "Ashland Group Returns"). For the taxable periods that began on and after the Distribution, Valvoline is not included in the Ashland Group Returns and files tax returns that include only Valvoline and/or its subsidiaries, as appropriate.

Valvoline has joint and several liability with Ashland to the U.S. Internal Revenue Service for the consolidated U.S. federal income taxes of the Ashland consolidated group for the taxable periods in which Valvoline was part of the Ashland Group Returns. Valvoline has joint control with Ashland, over any audit or examination related to taxes for which Valvoline is required to indemnify Ashland. Accordingly, these portions of the Tax Matters Agreement will be settled as examinations of the pre-Distribution periods are completed.

Summary of activity

Adjustments to the net obligations to Ashland under the Tax Matters Agreement are recorded within Net legacy and separation-related (income) expenses, with any resulting impacts to Valvoline's stand-alone income tax provision recorded in Income tax expense within the Consolidated Statements of Comprehensive Income.

In connection with filing the Company's fiscal 2019 income tax returns in the fourth quarter of fiscal 2020, management determined it is no longer more likely than not to realize certain tax attributes which were transferred from Ashland as a result of the Contribution. Accordingly, the Company recognized income tax expense of \$30 million to establish a valuation allowance for these tax attributes with an offsetting impact to reduce the estimated indemnity obligation, the combined effects of which have no impact to net income in the fiscal year ended September 30, 2020. Total liabilities related to obligations owed to Ashland under the Tax Matters Agreement are primarily recorded in Other noncurrent liabilities in the Consolidated Balance Sheets and were \$34 million and \$66 million as of September 30, 2020 and 2019, respectively.

Based on information available at this time, the Company has established adequate accruals for its obligations under the Tax Matters Agreement. In certain circumstances, the actual amounts ultimately required to satisfy these obligations could significantly exceed those currently reflected in the consolidated financial statements. Such estimates cannot currently be made given the uncertainty with regard to the nature and extent of items that could arise upon examination of the pre-Distribution periods, which include the Contribution and Distribution transactions. For example, if the tax-free nature of the Contribution and/or Distribution transactions is not sustained, if certain reorganization transactions undertaken in connection with the separation and the Distribution are determined to be taxable, or if additional matters arise upon examination of the pre-Distribution periods, Valvoline could have a substantial indemnification obligation to Ashland in excess of those currently provided.

Unrecognized tax benefits

The aggregate changes in the balance of gross unrecognized tax benefits were as follows for the years ended September 30:

(In millions)	2020	2019	2018
Gross unrecognized tax benefits as of October 1	\$ 14	\$ 10	\$ 10
Increases related to tax positions from prior years	1	5	2
Increases related to tax positions taken during the current year	1	—	1
Settlements with tax authorities	—	—	(2)
Lapses of statutes of limitation	(1)	(1)	(1)
Gross unrecognized tax benefits as of September 30 ^(a)	\$ 15	\$ 14	\$ 10

(a) These unrecognized tax benefits would favorably impact the effective income tax rate if recognized. Accruals for interest and penalties were \$2 million as of September 30, 2020 and 2019.

The Company's U.S. federal income tax returns and certain U.S. state jurisdictions remain open to examination from fiscal 2017 forward. With certain exceptions, years beginning on or after fiscal 2008 generally remain open to examination by certain non-U.S. taxing authorities. Given the indemnification of Ashland for periods in which Valvoline was included in Ashland Group Returns and the years that remain open to examination, a significant portion of the Company's liability for unrecognized tax benefits is included in the Tax Matters Agreement obligation summarized above. These periods that remain open to examination include federal income tax returns from fiscal 2014 and certain U.S. state jurisdictions from fiscal 2011.

Because Valvoline is routinely under examination by various taxing authorities, it is reasonably possible that the amount of unrecognized tax benefits will change during fiscal 2021. Due to the complexity and number of open years, it is not practical to estimate the amount or range of such change at this time. Based on current information available, management does not expect a material change to the Company's gross unrecognized tax benefits within fiscal 2021.

NOTE 11 – EMPLOYEE BENEFIT PLANS

Pension and other postretirement plans

The Company's U.S. pension plans are closed to new participants and the accrual of pension benefits has been frozen since September 30, 2016. In addition, most international pension plans are closed to new participants while those that remain open relate to areas where local laws require plans to operate within the applicable country. Valvoline also sponsors healthcare and life insurance plans for certain qualifying retired or disabled employees that were amended to reduce retiree life and medical benefits effective in early fiscal 2017 and limit annual per capita costs.

Components of net periodic benefit costs / income

The following table summarizes the components of pension and other postretirement plans net periodic benefit costs / income and the assumptions used in this determination for the years ended September 30:

(In millions)	Pension benefits			Other postretirement benefits		
	2020	2019	2018	2020	2019	2018
Net periodic benefit costs (income)						
Service cost	\$ 3	\$ 2	\$ 2	\$ —	\$ —	\$ —
Interest cost	61	81	75	1	2	2
Expected return on plan assets	(87)	(80)	(103)	—	—	—
Amortization of prior service credit ^(a)	—	—	—	(12)	(12)	(12)
Actuarial (gain) loss	(24)	61	38	2	8	—
Net periodic benefit (income) costs	<u>\$ (47)</u>	<u>\$ 64</u>	<u>\$ 12</u>	<u>\$ (9)</u>	<u>\$ (2)</u>	<u>\$ (10)</u>
Weighted-average plan assumptions ^(b)						
Discount rate for service cost	1.49 %	2.92 %	2.94 %	3.12 %	3.98 %	4.05 %
Discount rate for interest cost	2.79 %	4.00 %	3.23 %	2.69 %	3.83 %	3.11 %
Rate of compensation increase	3.04 %	3.06 %	3.05 %	—	—	—
Expected long-term rate of return on plan assets	4.64 %	4.66 %	5.17 %	—	—	—

(a) Other postretirement plan amendments noted above resulted in negative plan amendments that are amortized within this caption during all periods presented.

(b) The plan assumptions are a blended weighted-average rate for Valvoline's U.S. and non-U.S. plans. The U.S. pension plans represented approximately 97% of the total pension projected benefit obligation as of September 30, 2020. Other postretirement benefit plans consist of U.S. and Canada, with the U.S. plan representing approximately 79% of the total other postretirement projected benefit obligation as of September 30, 2020. Non-U.S. plans use assumptions generally consistent with those of U.S. plans.

The following table summarizes the net periodic benefit costs / income and the amortization of prior service credit recognized in Accumulated other comprehensive income during the years ended September 30:

(In millions)	Pension benefits		Other postretirement benefits	
	2020	2019	2020	2019
Amortization of prior service credit recognized in Accumulated other comprehensive income	\$ —	\$ —	\$ 12	\$ 12
Net periodic benefit (income) costs	(47)	64	(9)	(2)
Total amount recognized in net periodic benefit (income) costs and Accumulated other comprehensive income	<u>\$ (47)</u>	<u>\$ 64</u>	<u>\$ 3</u>	<u>\$ 10</u>

Obligations and funded status

The following table summarizes the changes in benefit obligations and the fair value of plan assets, as well as key assumptions used to determine the benefit obligations, and the amounts recognized in the Consolidated Balance Sheets for the Company's pension and other postretirement benefit plans as of September 30:

(In millions)	Pension benefits		Other postretirement benefits	
	2020	2019	2020	2019
Change in benefit obligations				
Benefit obligations as of October 1	\$ 2,287	\$ 2,087	\$ 55	\$ 51
Service cost	3	2	—	—
Interest cost	61	81	1	2
Benefits paid	(132)	(140)	(6)	(6)
Actuarial loss	107	253	2	8
Currency exchange rate changes	1	(2)	—	—
Transfers in	3	6	—	—
Settlements	(9)	—	—	—
Benefit obligations as of September 30	<u>\$ 2,321</u>	<u>\$ 2,287</u>	<u>\$ 52</u>	<u>\$ 55</u>
Change in plan assets				
Fair value of plan assets as of October 1	\$ 1,943	\$ 1,792	\$ —	\$ —
Actual return on plan assets	218	273	—	—
Employer contributions	22	14	6	6
Benefits paid	(133)	(140)	(6)	(6)
Currency exchange rate changes	1	(2)	—	—
Settlements	(9)	—	—	—
Transfers in	3	6	—	—
Fair value of plan assets as of September 30	<u>\$ 2,045</u>	<u>\$ 1,943</u>	<u>\$ —</u>	<u>\$ —</u>
Unfunded status of the plans as of September 30	<u>\$ 276</u>	<u>\$ 344</u>	<u>\$ 52</u>	<u>\$ 55</u>
Amounts recognized in the Consolidated Balance Sheets				
Noncurrent benefit asset	\$ 1	\$ —	\$ —	\$ —
Current benefit liabilities	10	9	5	6
Noncurrent benefit liabilities	267	335	47	49
Total benefit liabilities	277	344	52	55
Net liabilities recognized	<u>\$ 276</u>	<u>\$ 344</u>	<u>\$ 52</u>	<u>\$ 55</u>
Amounts recognized in Accumulated other comprehensive loss (income)				
Prior service cost (credit)	<u>\$ 1</u>	<u>\$ 1</u>	<u>\$ (33)</u>	<u>\$ (45)</u>
Weighted-average plan assumptions				
Discount rate	2.59 %	3.10 %	2.39 %	2.95 %
Rate of compensation increase	3.00 %	3.06 %	—	—
Healthcare cost trend rate ^(a)	—	—	6.7 %	6.9 %

(a) The assumed pre-65 health care cost trend rate continues to be reduced to 4.2% in 2037 and thereafter.

Valvoline recognizes the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each fiscal year and whenever a plan is determined to qualify for a remeasurement. Such gains and losses are reported within Net pension and other postretirement plan expense in the Consolidated Statements of Comprehensive Income and included a gain of \$22 million and a loss of \$69 million for the years ended September 30, 2020 and 2019, respectively.

The fiscal 2020 gain was primarily attributed to higher than expected returns on plan assets and favorable changes in mortality assumptions, which more than offset the impacts of lower discount rates. The fiscal 2019 loss was primarily attributed to decreases in discount rates, which were partially offset by higher than expected returns on plan assets and favorable changes in mortality assumptions.

Accumulated benefit obligation

The accumulated benefit obligation for all pension plans was \$2.3 billion as of September 30, 2020 and 2019, respectively. Information for pension plans with a benefit obligation in excess of the fair value of plan assets follows for the Company's plans as of September 30:

(In millions)	2020		2019	
	Benefit obligation	Plan assets	Benefit obligation	Plan assets
Plans with projected benefit obligation in excess of plan assets	\$ 2,275	\$ 1,998	\$ 2,242	\$ 1,898
Plans with accumulated benefit obligation in excess of plan assets	\$ 2,253	\$ 1,978	\$ 2,229	\$ 1,889

Plan assets

The following table summarizes the various investment categories that the pension plan assets are invested in and the applicable fair value hierarchy as described in Note 2 that the financial instruments are classified within these investment categories as of September 30, 2020 and 2019:

(In millions)	September 30, 2020				Assets measured at NAV
	Total fair value	Level 1	Level 2	Level 3	
Cash and cash equivalents	\$ 102	\$ 102	\$ —	\$ —	\$ —
U.S. government securities and futures	172	—	172	—	—
Other government securities	47	—	47	—	—
Corporate debt instruments	1,201	—	1,201	—	—
Insurance contracts	12	—	—	12	—
Private equity and hedge funds	13	—	—	—	13
Common collective trusts	497	—	—	—	497
Other investments	1	\$ —	1	\$ —	—
Total assets at fair value	\$ 2,045	\$ 102	\$ 1,421	\$ 12	\$ 510

September 30, 2019

(In millions)	Total fair value	Level 1	Level 2	Level 3	Assets measured at NAV
Cash and cash equivalents	\$ 166	\$ 166	\$ —	\$ —	\$ —
U.S. government securities and futures	162	—	162	—	—
Other government securities	41	—	41	—	—
Corporate debt instruments	1,075	—	1,075	—	—
Insurance contracts	7	—	—	7	—
Private equity and hedge funds	15	—	—	—	15
Common collective trusts	474	—	—	—	474
Other investments	3	—	3	—	—
Total assets at fair value	<u>\$ 1,943</u>	<u>\$ 166</u>	<u>\$ 1,281</u>	<u>\$ 7</u>	<u>\$ 489</u>

Cash and cash equivalents

The carrying value of cash and cash equivalents approximates fair value.

Government securities

Government securities are valued based on Level 2 inputs, which include yields available on comparable securities of issuers with similar credit ratings.

Corporate debt instruments

Corporate debt instruments are valued based on Level 2 inputs that are observable in the market or may be derived principally from, or corroborated by, recently executed transactions, observable market data such as pricing for similar securities, cash flow models with yield curves, counterparty credit ratings, and credit spreads applied to the terms of the debt instrument (maturity and coupon interest rate).

Insurance contracts

Insurance contracts are arrangements with insurance companies that guarantee the payment of the pension entitlements and are valued based on Level 3 inputs, which are neither quoted prices nor observable inputs for pricing. Insurance contracts are valued at cash surrender value, which approximates fair value.

Private equity and hedge funds

Private equity and hedge funds primarily represent alternative investments not traded on an active market which are valued at the NAV per share determined by the manager of the fund based on the fair value of the underlying net assets owned by the fund divided by the number of shares or units outstanding.

Common collective trusts

Common collective trusts are comprised of a diversified portfolio of investments across various asset classes, including U.S. and international equities, fixed-income securities, commodities and currencies. The collective trust funds are valued using a NAV provided by the manager of each fund, which is based on the underlying net assets owned by the fund, divided by the number of shares outstanding.

The following table provides a reconciliation of the beginning and ending balances for Level 3 plan assets:

(In millions)	Total Level 3 assets
Balance at September 30, 2018	\$ 4
Purchases	1
Actual return on assets held at end of year	2
Balance at September 30, 2019	7
Purchases	4
Actual return on assets held at end of year	1
Balance at September 30, 2020	\$ 12

The following table summarizes investments for which fair value is measured using the NAV per share practical expedient as of September 30, 2020:

(In millions)	Fair value at NAV	Unfunded commitments	Redemption frequency (if currently eligible)	Redemption notice period
Long/short hedge funds	\$ 4	\$ —	None ^(a)	None ^(a)
Relative value hedge funds	2	—	None ^(b)	None ^(b)
Event driven hedge funds	1	—	None ^(b)	None ^(b)
Common collective trusts	477	—	Daily	Up to 3 days
	12	—	Monthly	5 days
	8	—	N/A ^(c)	N/A ^(c)
Private equity	6	2	None ^(d)	None ^(d)
	<u>\$ 510</u>	<u>\$ 2</u>		

(a) These hedge funds are in the process of liquidation over the next year.

(b) These hedge funds are in the process of liquidation and the timing of such is unknown.

(c) These assets are held in investments in funds that include a diversified portfolio across various asset classes. The time period for redemption of these assets is not determinable.

(d) These private equity instruments are estimated to be liquidated over the next 1 to 5 years.

Investments and strategy

In developing an investment strategy for its defined benefit plans, Valvoline considered the following factors: the nature of the plans' liabilities, the allocation of liabilities between active, deferred and retired plan participants, the funded status of the plans, the applicable investment horizon, the respective size of the plans, and historical and expected investment returns. Valvoline's U.S. pension plan assets are managed by outside investment managers,

which are monitored against investment benchmark returns and Valvoline's established investment strategy. Investment managers are selected based on an analysis of, among other things, their investment process, historical investment results, frequency of management turnover, cost structure and assets under management. Assets are periodically reallocated between investment managers to maintain an appropriate asset mix and diversification of investments and to optimize returns.

The current target asset allocation for the U.S. plans is 75% fixed income securities and 25% equity-based securities. Fixed income securities are liability matching assets that primarily include long duration high grade corporate debt obligations. Equity-based securities are return-seeking assets that include both traditional equities as well as a mix of non-traditional assets such as hedge and commingled funds and private equity. Investment managers may employ a limited use of futures or other derivatives to manage risk within the portfolio through efficient exposure to markets. Valvoline's pension plans hold a variety of investments designed to diversify risk and achieve an adequate net investment return to provide for future benefit payments to its participants.

Valvoline's investment strategy and management practices relative to non-U.S. plan assets are generally consistent with those for U.S. plans, except in those countries where the investment of plan assets is dictated by applicable

regulations. The weighted-average asset allocations for Valvoline's plans by asset category follow as of September 30:

	Target	2020	2019
Plan assets allocation			
Equity securities	15-25%	18 %	17 %
Debt securities	65-85%	80 %	81 %
Other	0-20%	2 %	2 %
Total		100 %	100 %

The basis for determining the expected long-term rate of return is a combination of future return assumptions for the various asset classes in Valvoline's investment portfolio based on active management, historical analysis of previous returns, market indices, and a projection of inflation, net of plan expenses.

Funding and benefit payments

Valvoline contributed \$22 million and \$14 million to its pension plans during fiscal 2020 and 2019, respectively. Valvoline does not plan to contribute to its U.S. qualified pension plans in fiscal 2021, but expects to contribute approximately \$13 million to its U.S. non-qualified and non-U.S. pension plans.

The following benefit payments, which reflect future service expectations, are projected to be paid in each of the next five fiscal years and the five fiscal years thereafter in aggregate:

(In millions)	Pension benefits	Other postretirement benefits
2021	\$ 143	\$ 5
2022	143	4
2023	143	4
2024	139	3
2025	139	3
2026 - 2030	671	14
Total	\$ 1,378	\$ 33

Other plans

Defined contribution and other defined benefit plans

Valvoline sponsors certain defined contribution savings plans that provide matching contributions. Expense associated with these plans was \$15 million in fiscal 2020 and \$14 million in each of fiscal 2019 and 2018.

Valvoline also sponsors various other benefit plans, some of which are required by local laws within certain countries. Total liabilities associated with these plans were \$3 million and \$4 million as of September 30, 2020 and 2019, respectively.

Multiemployer pension plans

Valvoline participates in two multiemployer pension plans that provide pension benefits to certain union-represented employees under the terms of collective bargaining agreements. Valvoline assumed responsibility for contributions to these plans in connection with the separation from its former parent company. Contributions to these plans were not material for any period presented herein.

In April 2018, Valvoline received a demand for payment of a partial withdrawal liability assessment related to the sale of a business by its former parent company in fiscal 2011 and the associated reduction in contributions and the number of employees covered by one of the multiemployer pension plans. The Company vigorously contested the

assessment and the calculation method utilized and settled the matter in early fiscal 2020 consistent with its reserve at a cost that was not material to the consolidated financial statements.

Incentive plans

Reserves for incentive plans were \$39 million and \$25 million as of September 30, 2020 and 2019, respectively.

NOTE 12 – LITIGATION, CLAIMS AND CONTINGENCIES

From time to time, Valvoline is party to lawsuits, claims and other legal proceedings that arise in the ordinary course of business. The Company establishes liabilities for the outcome of such matters where losses are determined to be probable and reasonably estimable. Where appropriate, the Company has recorded liabilities with respect to these matters, which were not material for the periods presented as reflected in the consolidated financial statements herein. There are certain claims and legal proceedings pending where loss is not determined to be probable or reasonably estimable, and therefore, accruals have not been made. In addition, Valvoline discloses matters for which management believes a material loss is at least reasonably possible.

In all instances, management has assessed each matter based on current information available and made a judgment concerning its potential outcome, giving due consideration to the amount and nature of the claim and the probability of success. The Company believes it has established adequate accruals for liabilities that are probable and reasonably estimable.

Although the ultimate resolution of these matters cannot be predicted with certainty and there can be no assurances that the actual amounts required to satisfy liabilities from these matters will not exceed the amounts reflected in the consolidated financial statements, based on information available at this time, it is the opinion of management that such pending claims or proceedings will not have a material adverse effect on its consolidated financial statements.

NOTE 13 – STOCK-BASED COMPENSATION PLANS

Valvoline has approved stock-based incentive plans that authorize 21 million shares of common stock to be issued, with approximately 14 million shares of common stock remaining available for issuance as of September 30, 2020. The Valvoline stock-based incentive plans authorize the grant of stock options, stock appreciation rights (“SARs”), performance share units, and other nonvested stock awards, principally in the form of restricted stock and restricted stock units. The Compensation Committee of the Board of Directors administers the Valvoline stock-based incentive plans and has the authority to determine the individuals to whom awards will be made, the amount of those awards, and other terms and conditions of the awards.

The following is a summary of stock-based compensation expense recognized by the Company during the years ended September 30:

(In millions)	2020	2019	2018
Stock appreciation rights	\$ 1	\$ 1	\$ 2
Nonvested stock awards	6	8	9
Performance awards	5	1	1
Total stock-based compensation expense, pre-tax ^(a)	12	10	12
Tax benefit	(3)	(2)	(3)
Total stock-based compensation expense, net of tax	\$ 9	\$ 8	\$ 9

(a) Includes approximately \$1 million in each period presented related to certain awards that are cash-settled and liability-classified; therefore, fair value is remeasured at the end of each reporting period until settlement.

Stock appreciation rights

SARs were granted to certain Valvoline employees to provide award holders with the ability to profit from the appreciation in value of a set number of shares of common stock over a period of time by exercising their award and receiving the sum of the increase in shares. SARs were granted at a price equal to the fair market value of the stock on the date of grant and typically vest and become exercisable over a period of one to three years. Unexercised SARs generally lapse ten years after the grant date.

The following table summarizes the activity relative to SARs for the year ended September 30, 2020:

	Number of shares (in thousands)	Weighted average exercise price per share	Weighted average remaining term (in years)	Aggregate intrinsic value (in millions)
SARs outstanding as of September 30, 2019	1,815	\$ 18.88	6.2 years	\$ 6
Granted	265	\$ 23.01		
Exercised	(166)	\$ 15.19		\$ 1
Forfeited	(31)	\$ 21.69		
SARs outstanding as of September 30, 2020	1,883	\$ 19.75	5.8 years	\$ 2
SARs exercisable as of September 30, 2020	1,465	\$ 19.02	5.1 years	\$ 2

The aggregate intrinsic value of SARs exercised (the amount by which the market price of the stock on the date of exercise exceeded the exercise price of the SAR) was \$1 million during fiscal 2020, \$1 million during fiscal 2019, and \$2 million during fiscal 2018. As of September 30, 2020, there was \$1 million of total unrecognized compensation cost related to SARs, which is expected to be recognized over a weighted average period of 1.9 years.

Stock-based compensation expense for SARs was computed using the Black-Scholes option-pricing model to estimate the grant date fair value of new or modified awards with the following key assumptions for the years ended September 30:

	2020	2019	2018
Weighted average grant date fair value per share	\$ 5.14	\$ 5.36	\$ 5.56
Assumptions (weighted average)			
Risk-free interest rate ^(a)	1.7 %	2.9 %	2.2 %
Expected dividend yield	2.0 %	1.5 %	0.9 %
Expected volatility ^(b)	27.1 %	26.8 %	23.3 %
Expected term (in years) ^(c)	5.88	5.88	5.88

(a) Based on the U.S. Treasury yield curve in effect at the time of grant or modification for the expected term of the award.

(b) Due to the lack of historical data for Valvoline, expected volatility is based on the average of peer companies' historical daily equity volatilities with look-back periods commensurate with the expected term.

(c) Due to the lack of historical data for Valvoline, the expected term is based on the mid-point between the vesting date and the end of the contractual term.

Nonvested stock awards

Nonvested stock awards in the form of Restricted Stock Awards ("RSAs") and Restricted Stock Units ("RSUs") were granted to certain Valvoline employees and directors. These awards were granted at a price equal to the fair market value of the underlying common stock on the grant date, generally vest over a one to three-year period, and are subject to forfeiture upon termination of service before the vesting periods end. These awards were primarily granted as RSUs that settle in shares upon vesting, while RSAs result in share issuance at grant, which entitles award holders to voting rights that are restricted until vesting. Dividends on nonvested stock awards are generally granted in the form of additional units or shares of nonvested stock awards, which are subject to vesting and forfeiture provisions.

The following table summarizes nonvested share activity for the year ended September 30, 2020:

	Number of shares (in thousands)	Weighted average grant date fair value per share
Unvested shares as of September 30, 2019	1,083	\$ 21.52
Granted	313	\$ 21.54
Vested	(296)	\$ 21.96
Forfeited	(40)	\$ 20.75
Unvested shares as of September 30, 2020	1,060	\$ 19.76

The total grant date fair value of shares vested was \$4 million, \$10 million and \$6 million for the years ended September 30, 2020, 2019 and 2018, respectively. The weighted average grant date fair value for nonvested stock awards granted in fiscal 2020, 2019 and 2018 was \$21.54, \$20.41 and \$23.17, respectively. As of September 30, 2020, there was \$4 million of total unrecognized compensation costs related to nonvested stock awards, which is expected to be recognized over a weighted average period of 3.0 years. The aggregate intrinsic value of nonvested stock awards as of September 30, 2020 is \$20 million.

Performance awards

Performance share units were awarded to certain key Valvoline employees that are aligned with overall financial performance relative to selected industry peer groups and/or internal targets. Awards are granted annually, with each award covering a three-year performance and vesting period. Each performance share unit is convertible to one share of common stock, and the actual number of shares issuable upon vesting is determined based upon performance compared to market and financial performance targets. Nonvested performance share units do not entitle employees to vote or to receive any dividends thereon.

The following table summarizes performance award activity for the year ended September 30, 2020:

	Number of shares (in thousands)	Weighted average grant date fair value per share
Unvested shares as of September 30, 2019	423	\$ 22.31
Granted	177	\$ 23.21
Expected performance adjustments ^(a)	47	\$ 22.73
Vested	(29)	\$ 23.01
Forfeited	(10)	\$ 22.12
Unvested shares as of September 30, 2020	608	\$ 22.70

(a) Adjustments relate to changes in estimate based on current expectations of the achievement of performance targets where performance awards can be issued within a range of 0 to 250%.

As of September 30, 2020, there was \$7 million of unrecognized compensation costs related to nonvested performance share awards, which is expected to be recognized over a weighted average period of approximately 1.8 years. The aggregate intrinsic value of the performance-based nonvested stock awards as of September 30, 2020 is \$12 million.

With regard to the performance conditions, the fair value of new or modified awards is equal to the grant date fair market value of Valvoline's common stock, and compensation cost is recognized over the requisite service period when it is probable that the performance condition will be satisfied. For market conditions, compensation cost is

recognized regardless of whether the conditions are satisfied and based on the grant date fair value of new or modified awards using a Monte Carlo simulation valuation model using the following key assumptions:

	2020	2019	2018
Weighted average grant date fair value per share	\$ 23.21	\$ 21.22	\$ 23.82
Assumptions (weighted average)			
Risk-free interest rates ^(a)	1.6 %	2.8 %	1.7 %
Expected dividend yield	2.1 %	1.3 %	1.0 %
Expected volatility ^(b)	26.0 %	26.8 %	24.2 %
Expected term (in years)	3.0	3.0	3.0

(a) Based on the U.S. Treasury yield curve in effect at the time of grant or modification for the expected term of the award. The range of risk-free interest rates used for performance awards was 1.55% to 1.59% in fiscal 2020, 2.66% to 2.82% in fiscal 2019, and 1.55% to 1.82% in fiscal 2018.

(b) Due to the lack of historical data for Valvoline, expected volatility is based on the average of peer companies' historical volatilities with look-back periods commensurate with the expected term.

NOTE 14 - EARNINGS PER SHARE

The following is the summary of basic and diluted EPS for the years ended September 30:

(In millions, except per share data)	2020	2019	2018
Numerator			
Net income	\$ 317	\$ 208	\$ 166
Denominator			
Weighted average common shares outstanding	187	189	197
Effect of potentially dilutive securities	1	—	—
Weighted average diluted shares outstanding	188	189	197
Earnings per share			
Basic	\$ 1.70	\$ 1.10	\$ 0.84
Diluted	\$ 1.69	\$ 1.10	\$ 0.84

NOTE 15 - ACCUMULATED OTHER COMPREHENSIVE INCOME

Changes in Accumulated other comprehensive income by component for fiscal years 2020 and 2019 were as follows:

(In millions)	Unamortized benefit plan credits	Currency translation adjustments	Changes in fair value of cash flow hedges	Total
Balance as of September 30, 2018	\$ 43	\$ (11)	\$ —	\$ 32
Other comprehensive loss before reclassification	—	(11)	—	(11)
Gains reclassified out of accumulated other comprehensive income	(12)	(1)	—	(13)
Tax expense	3	—	—	3
Balance as of September 30, 2019	34	(23)	—	11
Other comprehensive income (loss) before reclassification	—	6	(1)	5
(Gain) loss reclassified out of accumulated other comprehensive income	(12)	1	—	(11)
Tax expense	3	—	—	3
Balance as of September 30, 2020	\$ 25	\$ (16)	\$ (1)	\$ 8

Amounts reclassified from Accumulated other comprehensive income follow for the years ended September 30:

(in millions)	2020	2019	2018
Amortization of pension and other postretirement plan prior service credits ^(a)	\$ (12)	\$ (12)	\$ (12)
Loss (gain) on liquidation of subsidiaries ^(b)	1	(1)	1
Tax effect of reclassifications	3	3	2
Net of tax	(8)	(10)	(9)
Reclassification of income tax effects of U.S. tax reform ^(c)	—	—	8
Total amounts reclassified, net of tax	\$ (8)	\$ (10)	\$ (1)

(a) Amortization of unrecognized prior service credits included in net periodic benefit income for pension and other postretirement plans was reported in Net pension and other postretirement plan (income) expenses within the Consolidated Statements of Comprehensive Income. The Company releases the income tax effects from Accumulated other comprehensive income as benefit plan credits are amortized into earnings.

(b) Represents the realization of cumulative translation adjustments in Equity and other income, net within the Consolidated Statements of Comprehensive Income as a result of the liquidation of certain non-U.S. subsidiaries.

(c) Represents the reclassification from Accumulated other comprehensive income to Retained deficit in the Consolidated Balance Sheet related to the stranded income tax effects of U.S. tax reform resulting from the change in the federal corporate tax rate.

NOTE 16 – REPORTABLE SEGMENT INFORMATION

Valvoline manages and reports within the following three segments:

- **Quick Lubes** - services the passenger car and light truck quick lube market through company-owned and independent franchised retail quick lube service center stores and independent Express Care stores that service vehicles with Valvoline products, as well as through investment in a joint venture in China to pilot expansion of retail quick lube service center stores outside of North America.
- **Core North America** - sells engine and automotive maintenance products in the United States and Canada to retailers, installers, and heavy-duty customers to service vehicles and equipment.
- **International** - sells engine and automotive products in more than 140 countries outside of the United States and Canada for the maintenance of consumer and commercial vehicles and equipment.

These segments represent components of the Company for which separate financial information is available that is utilized on a regular basis by the chief operating decision maker in assessing segment performance and in allocating the Company's resources. Sales and operating income are the primary U.S. GAAP measures evaluated in assessing each reportable segment's financial performance. Operating income by segment includes the allocation of shared corporate costs, which are allocated consistently based on each segment's proportional contribution to various financial measures. Intersegment sales are not material, and assets are not allocated and included in the assessment of segment performance; consequently, these items are not disclosed by segment herein.

To maintain operating focus on business performance, certain corporate and non-operational items, including restructuring and related expenses, as well as adjustments related to legacy businesses that no longer are attributed to Valvoline, are excluded from the segment operating results utilized by the chief operating decision maker in evaluating segment performance and are separately delineated within Unallocated and other to reconcile to total reported Operating income as shown in the table below.

Valvoline did not have a single customer that represented 10% or more of consolidated net sales in fiscal 2020, 2019 or 2018.

Reportable segment results

The following table presents sales, operating income, and depreciation and amortization by reportable segment for the years ended September 30:

(In millions)	2020		2019		2018	
Sales						
Quick Lubes	\$	883	\$	822	\$	660
Core North America		945		994		1,035
International		525		574		590
Consolidated sales	\$	2,353	\$	2,390	\$	2,285
Operating income						
Quick Lubes	\$	169	\$	178	\$	153
Core North America		202		152		172
International		73		85		84
Total operating segments		444		415		409
Unallocated and other ^(a)		41		(17)		(14)
Consolidated operating income	\$	485	\$	398	\$	395
Depreciation and amortization						
Quick Lubes	\$	43	\$	36	\$	30
Core North America		16		18		18
International		7		7		6
Consolidated depreciation and amortization	\$	66	\$	61	\$	54

(a) Unallocated and other includes net legacy and separation-related activity and certain other corporate matters not allocated to the reportable segments.

Disaggregation of revenue

The following table summarizes sales by category for each reportable segment for the years ended September 30:

	Sales by category								
	Quick Lubes			Core North America			International		
	2020	2019	2018	2020	2019	2018	2020	2019	2018
Lubricants	84 %	84 %	85 %	87 %	86 %	85 %	89 %	88 %	89 %
Antifreeze	1 %	1 %	1 %	8 %	9 %	8 %	5 %	5 %	5 %
Filters	8 %	8 %	8 %	1 %	1 %	3 %	1 %	1 %	3 %
Chemicals and other	2 %	2 %	2 %	4 %	4 %	4 %	5 %	6 %	3 %
Franchise fees	5 %	5 %	4 %	—	—	—	—	—	—
Total	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %

The following table summarizes sales by primary customer channel for the Company's reportable segments for the years ended September 30:

(In millions)	2020	2019
Quick Lubes		
Company-owned operations	\$ 591	\$ 531
Non-company owned operations	292	291
Total Quick Lubes	883	822
Core North America		
Retail	556	543
Installer and other	389	451
Total Core North America	945	994
International	525	574
Consolidated sales	\$ 2,353	\$ 2,390

Sales by reportable segment disaggregated by geographic market are summarized as follows:

(In millions)	Quick Lubes	Core North America	International	Totals
Year ended September 30, 2020				
North America ^(a)	\$ 883	\$ 945	\$ —	\$ 1,828
Europe, Middle East and Africa ("EMEA")	—	—	169	169
Asia Pacific	—	—	273	273
Latin America ^(a)	—	—	83	83
Total	\$ 883	\$ 945	\$ 525	\$ 2,353
Year ended September 30, 2019				
North America ^(a)	\$ 822	\$ 994	\$ —	\$ 1,816
EMEA	—	—	181	181
Asia Pacific	—	—	285	285
Latin America ^(a)	—	—	108	108
Total	\$ 822	\$ 994	\$ 574	\$ 2,390
Year ended September 30, 2018				
North America ^(a)	\$ 660	\$ 1,035	\$ —	\$ 1,695
EMEA	—	—	175	175
Asia Pacific	—	—	302	302
Latin America ^(a)	—	—	113	113
Total	\$ 660	\$ 1,035	\$ 590	\$ 2,285

(a) Valvoline includes the United States and Canada in its North America region. Mexico is included within the Latin America region.

Entity-wide disclosures

The following table presents sales and net property, plant and equipment by geographic area for the years ended and as of September 30:

(In millions)	Sales from external customers ^(a)			Property, plant and equipment, net ^(b)	
	2020	2019	2018	2020	2019
United States	\$ 1,775	\$ 1,766	\$ 1,652	\$ 512	\$ 431
International	578	624	633	101	67
Total	\$ 2,353	\$ 2,390	\$ 2,285	\$ 613	\$ 498

(a) Sales are attributed to the geographic area where product and services are delivered.

(b) Property, plant and equipment, net is attributed to the geographic area in which assets physically reside.

NOTE 17 – SUPPLEMENTAL BALANCE SHEET INFORMATION

Cash, cash equivalents and restricted cash

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Consolidated Balance Sheets to the totals shown within the Consolidated Statements of Cash Flows for the years ended September 30:

(In millions)	2020	2019	2018
Cash and cash equivalents	\$ 760	\$ 159	\$ 96
Restricted cash ^(a)	1	—	—
Total cash, cash equivalents and restricted cash	\$ 761	\$ 159	\$ 96

(a) Included in Prepaid expenses and other current assets within the Consolidated Balance Sheets.

Accounts and other receivables

The following summarizes Valvoline's accounts and other receivables in the Consolidated Balance Sheets as of September 30:

(In millions)	2020	2019
Current		
Trade	\$ 409	\$ 394
Other	14	10
Notes receivable from franchisees	13	—
Receivables, gross	436	404
Allowance for doubtful accounts	(3)	(3)
Receivables, net	\$ 433	\$ 401
Non-current ^(a)		
Notes receivable from franchisees	\$ 13	\$ —
Other notes receivable	8	5
Noncurrent notes receivable, gross	21	5
Allowance for losses	(4)	(2)
Noncurrent notes receivable, net	\$ 17	\$ 3

(a) Included in Other noncurrent assets within the Consolidated Balance Sheets.

Valvoline is party to an agreement to sell certain trade accounts receivable in the form of drafts or bills of exchange to a financial institution. Each draft constitutes an order to pay Valvoline for obligations of the customer arising from the sale of goods. The intention of the arrangement is to decrease the time accounts receivable is outstanding and increase cash flows. Valvoline sold \$59 million and \$75 million of accounts receivable to the financial institution during the years ended September 30, 2020 and 2019, respectively.

Inventories

Inventories are primarily carried at the lower of cost or net realizable value using the weighted average cost method. In addition, certain lubricants with a replacement cost of \$99 million at September 30, 2020 and \$107 million at September 30, 2019 are valued at the lower of cost or market using the LIFO method.

The following summarizes Valvoline's inventories in the Consolidated Balance Sheets as of September 30:

(In millions)	2020	2019
Finished products	\$ 195	\$ 203
Raw materials, supplies and work in process	30	32
Reserve for LIFO cost valuation	(26)	(41)
Total inventories, net	<u>\$ 199</u>	<u>\$ 194</u>

Property, plant and equipment

The following table summarizes the various components of property, plant and equipment within the Consolidated Balance Sheets as of September 30:

(In millions)	2020	2019
Land ^(a)	\$ 96	\$ 58
Buildings ^(b)	412	348
Machinery and equipment	494	475
Construction in progress	101	72
Total property, plant and equipment	1,103	953
Accumulated depreciation ^(c)	(490)	(455)
Net property, plant and equipment	<u>\$ 613</u>	<u>\$ 498</u>

(a) Includes \$34 million of finance lease assets as of September 30, 2020.

(b) Includes \$43 million of finance lease assets and \$61 million of assets under capital leases and financing obligations as of September 30, 2020 and 2019, respectively.

(c) Includes \$10 million for finance lease assets and \$11 million for assets under capital leases and financing obligations as of September 30, 2020 and 2019, respectively.

Non-cash accruals included in total property, plant and equipment were \$51 million and \$10 million during the years ended September 30, 2020 and 2019, respectively.

The following summarizes expense associated with property, plant and equipment recognized within the Consolidated Statements of Comprehensive Income for the years ended September 30:

(In millions)	2020	2019	2018
Depreciation (includes capital and financing leases)	\$ 56	\$ 52	\$ 49

Transactions with Ashland

Valvoline had total net obligations due to Valvoline's former parent company of \$48 million and \$78 million as of September 30, 2020 and 2019, respectively, which were primarily recorded in Other noncurrent liabilities in the Consolidated Balance Sheets. These liabilities relate to net obligations due under the Tax Matters Agreement as well as reimbursements payable for certain other contractual obligations, including those intended to transfer to Valvoline as part of the Distribution. Refer to Note 10 for additional details regarding the Tax Matters Agreement and related obligations.

NOTE 18 – QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

The following table presents quarterly financial information and per share data:

(In millions, except per share amounts)	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
	2020	2019	2020	2019	2020	2019	2020	2019
Sales	\$ 607	\$ 557	\$ 578	\$ 591	\$ 516	\$ 613	\$ 652	\$ 629
Gross profit ^(a)	\$ 211	\$ 183	\$ 207	\$ 203	\$ 187	\$ 207	\$ 258	\$ 217
Operating income ^(b)	\$ 104	\$ 87	\$ 117	\$ 96	\$ 88	\$ 102	\$ 176	\$ 113
Income before income taxes ^{(b) (c)}	\$ 97	\$ 72	\$ 88	\$ 80	\$ 78	\$ 85	\$ 188	\$ 28
Net income ^(d)	\$ 73	\$ 53	\$ 63	\$ 63	\$ 59	\$ 65	\$ 122	\$ 27
Net earnings per common share ^(e)								
Basic	\$ 0.39	\$ 0.28	\$ 0.33	\$ 0.33	\$ 0.32	\$ 0.34	\$ 0.66	\$ 0.14
Diluted	\$ 0.39	\$ 0.28	\$ 0.33	\$ 0.33	\$ 0.32	\$ 0.34	\$ 0.66	\$ 0.14

- (a) Included in gross profit is \$5 million related to the compensated absences benefits change in the fourth fiscal quarter of 2020 and business interruption expenses of \$1 million and \$5 million in the second and third fiscal quarters of 2019, respectively.
- (b) Operating and pre-tax income include the matters noted in (a), as well as adjustments associated with legacy and separation-related matters, restructuring activities, acquisition and divestiture-related activity, and business interruption recoveries. Restructuring expense of \$1 million and \$1 million of legacy and separation-related income were recognized in the first fiscal quarter of 2020, combining for no net impact on operating and pre-tax income. In the second fiscal quarter of 2020, \$2 million of acquisition and divestiture-related expenses were incurred, and in the prior year period, legacy and separation-related and restructuring and related expenses were recognized of \$3 million and \$8 million, respectively. Expenses associated with legacy and separation-related matters and restructuring of \$1 million and \$4 million were recognized in the third fiscal quarters of 2020 and 2019, respectively. In the fourth fiscal quarter of 2020, income associated with legacy and separation-related adjustments, the compensated absences benefits change, business interruption recoveries, and restructuring were recognized of \$30 million, \$6 million (in addition to the benefit noted in (a) above), \$2 million, and \$1 million, respectively. In the fourth quarter of fiscal 2019, income associated with an acquisition-related bargain purchase gain of \$4 million was partially offset by \$2 million of restructuring and related expenses.
- (c) In addition to the matters summarized in (a) and (b), income before income taxes includes debt extinguishment and modification costs of \$19 million in the second fiscal quarter of 2020, as well as pension and other postretirement plan remeasurement adjustments, which resulted in a \$22 million gain and a \$69 million loss in the fourth fiscal quarters of 2020 and 2019, respectively.
- (d) Net income includes the matters noted above as well as discrete adjustments to the income tax provision, which included \$2 million of expense in the second fiscal quarter of 2020 related to India tax reform, a \$2 million benefit in the second fiscal quarter of 2019 associated with Kentucky tax reform, and net expense of \$28 million due to establishing a valuation allowance on legacy tax attributes, partially offset by a benefit primarily as a result of federal tax legislation enacted in the fourth fiscal quarter of 2020.
- (e) Net earnings per share in each quarter is computed using the weighted average number of shares outstanding during that quarter while net earnings per share for the full year is computed using the weighted average number of shares outstanding during the year. Thus, the sum of the four quarters' net earnings per share will not necessarily equal the full-year net earnings per share.

NOTE 19 – SUBSEQUENT EVENTS

Quick Lubes acquisitions

From October 1 through November 17, 2020, Valvoline acquired 54 service center stores in single and multi-store transactions for an aggregate purchase price of \$162 million. These acquisitions included 14 service center stores in Texas acquired from Kent Lubrication Centers Ltd. (doing business as Avis Lube) on October 1, 2020; 21 former franchise service center stores in Kansas and Missouri acquired from Westco Lube, Inc. on October 15, 2020; and 12 service center stores in Idaho acquired from L & F Enterprises (doing business as Einstein's Oilery) on October 30, 2020. These acquisitions provide an opportunity to expand Valvoline's Quick Lubes system in key markets and grow to more than 600 company-owned service center stores.

Dividend declared

On November 12, 2020 the Company's Board of Directors approved a quarterly cash dividend of \$0.125 per share of common stock. The dividend is payable December 15, 2020 to shareholders of record on November 30, 2020.

China working capital credit facility

On November 16, 2020, the Company entered into a one-year revolving credit facility of approximately \$23 million to finance working capital of the blending and packaging plant in China, as needed. Borrowings will bear interest at the local prime rate less the applicable interest rate margin with interest due monthly and repayment of borrowings due at maturity.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures

Valvoline's Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), with the assistance of management, has evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended ("Exchange Act")), as of the end of the period covered by this Annual Report on Form 10-K (the "Evaluation Date"), and based upon such evaluation, have concluded that as of the Evaluation Date, the Company's disclosure controls and procedures were effective. These controls are designed to ensure that information required to be disclosed in the reports that are filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission ("SEC"), and that such information is accumulated and communicated to Valvoline's management, including the CEO and CFO, to allow timely decisions regarding required disclosure.

Management's report on internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Management assessed the effectiveness of the Company's internal control over financial reporting as of September 30, 2020 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in the 2013 Internal Control - Integrated Framework. Based on this assessment, management concluded that the Company's internal control over financial reporting was effective as of September 30, 2020 based on those criteria. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Valvoline's independent registered public accounting firm, Ernst & Young LLP, has issued an audit report with respect to the effectiveness of the Company's internal control over financial reporting as of September 30, 2020, which appears herein.

Changes in internal control

During the fourth fiscal quarter ended September 30, 2020, there were no significant changes in Valvoline's internal control over financial reporting that materially affected, or are reasonably likely to materially affect, Valvoline's internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of
Valvoline Inc. and Consolidated Subsidiaries

Opinion on Internal Control over Financial Reporting

We have audited Valvoline Inc. and Consolidated Subsidiaries' internal control over financial reporting as of September 30, 2020, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Valvoline Inc. and Consolidated Subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of September 30, 2020, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of September 30, 2020 and 2019, the related consolidated statements of comprehensive income, stockholders' deficit and cash flows for each of the three years in the period ended September 30, 2020, and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated November 24, 2020, expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP

Cincinnati, Ohio
November 24, 2020

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

A list of Valvoline's executive officers and related information appears under the caption "Executive Officers of Valvoline" in Item 1 of Part I of this Annual Report on Form 10-K. The other information required by this item will be included under the captions, "Proposal One - Election of Directors," "Corporate Governance - Overview of Governance Principles," "Corporate Governance - Shareholder Recommendations for and Nominations of Directors," and "Audit Committee Report" in Valvoline's Proxy Statement for its 2021 Annual Meeting of Shareholders ("2021 Proxy Statement"), which will be filed with the SEC within 120 days after September 30, 2020, and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be included under the captions "Compensation of Directors," "Corporate Governance - Compensation Committee Interlocks and Insider Participation," "Corporate Governance - The Board's Role in Risk Oversight," "Executive Compensation," "Compensation Discussion and Analysis," "Summary Compensation Table," "Grants of Plan-Based Awards for Fiscal 2020," "Outstanding Equity Awards at Fiscal 2020 Year End," "Option Exercises and Stock Vested for Fiscal 2020," "Pension Benefits for Fiscal 2020," "Non-Qualified Deferred Compensation for Fiscal 2020," "Potential Payments Upon Termination or Change in Control for Fiscal 2020 Table," "CEO Pay Ratio," and "Report of the Compensation Committee" in Valvoline's 2021 Proxy Statement and is incorporated herein by reference.

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

The information required by this item will be included under the captions "Stock Ownership Information" and "Equity Compensation Plan Information" in Valvoline's 2021 Proxy Statement and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this item will be included under the captions "Corporate Governance - Valvoline's Board of Directors - Independence," and "Corporate Governance - Related Person Transaction Policy" in Valvoline's 2021 Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is set forth under the captions "Audit Committee Matters" and "Proposal Two - Ratification of Independent Registered Public Accounting Firm" in Valvoline's 2021 Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULE

(a) Documents filed as part of this Report

(1) Financial statements

The consolidated financial statements of Valvoline filed as part of this Annual Report on Form 10-K are included in Item 8 of Part II.

Separate financial statements of unconsolidated affiliates are omitted because none of these companies constitute significant subsidiaries using the 20% tests when considered individually. Summarized financial information for all unconsolidated affiliates is disclosed in Note 6 of the Notes to Consolidated Financial Statements.

(2) Financial statement schedule

Financial Statement Schedule II - Valuation and Qualifying Accounts included in this Form 10-K. All other schedules are not required under the related instructions or are not applicable.

(3) Exhibits

See Item 15(b) included in this Annual Report on Form 10-K.

(b) Documents required by Item 601 of Regulation S-K

- 3.1 - [Amended and Restated Articles of Incorporation of Valvoline Inc. \(incorporated by reference to Exhibit 3.1 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on November 17, 2017\).](#)
- 3.2 - [Amended and Restated By-laws of Valvoline Inc. \(incorporated by reference to Exhibit 3.2 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 4.1 - [Specimen Stock Certificate \(incorporated by reference to Exhibit 4.1 to Valvoline's Registration Statement on Form S-1 \(File No. 333-211720\) filed on September 12, 2016\).](#)
- 4.2 - [Indenture, dated as of August 8, 2017, among Valvoline Inc., the Subsidiary Guarantors, and U.S. Bank National Association, as Trustee \(incorporated by reference to Exhibit 4.1 to Valvoline's Quarterly Report on Form 10-Q \(File No. 001-37884\) filed on August 8, 2017\).](#)
- 4.3 - [Indenture, dated as of February 25, 2020, among Valvoline Inc. the guarantors party thereto and U.S. Bank National Association, as Trustee \(incorporated by reference to Exhibit 4.1 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on February 25, 2020\).](#)
- 4.5 - [Description of Securities \(incorporated by reference to Exhibit 4.5 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on November 22, 2019\).](#)

The following Exhibits 10.1 through 10.23 are contracts, compensatory plans or arrangements, or management contracts required to be filed as exhibits pursuant to Items 601(b)(10)(ii)(A) and 601(b)(10)(iii)(A) and (B) of Regulations S-K.

- 10.1 - [Valvoline Inc. 2016 Deferred Compensation Plan for Employees \(incorporated by reference to Exhibit 10.1 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.2 - [Valvoline Inc. 2016 Deferred Compensation Plan for Non-Employee Directors \(incorporated by reference to Exhibit 10.6 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.3 - [2016 Valvoline Inc. Incentive Plan, as Amended \(incorporated by reference to Exhibit 10.1 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on February 5, 2019\).](#)

- 10.4 - [Valvoline Inc. Employee Stock Purchase Plan \(incorporated by reference to Exhibit 10.1 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on February 5, 2018\).](#)
- 10.5 - [Form of \(Outside Directors\) Restricted Stock Award Agreement pursuant to the 2016 Valvoline Inc. Incentive Plan \(incorporated by reference to Exhibit 10.3 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.6 - [Form of Performance Unit Award Agreement pursuant to the 2016 Valvoline Inc. Incentive Plan \(incorporated by reference to Exhibit 10.5 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on May 15, 2017\).](#)
- 10.7 - [Form of Stock Appreciation Right Award Agreement pursuant to the 2016 Valvoline Inc. Incentive Plan \(incorporated by reference to Exhibit 10.6 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on May 15, 2017\).](#)
- 10.8* - [Form of Stock Appreciation Right Award Agreement pursuant to the 2016 Valvoline Inc. Incentive Plan, as Amended, for awards granted after fiscal 2020.](#)
- 10.9 - [Form of Restricted Stock Unit Award Agreement pursuant to the 2016 Valvoline Inc. Incentive Plan \(incorporated by reference to Exhibit 10.7 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on November 17, 2017\).](#)
- 10.10 - [Form of Restricted Stock Unit Award Agreement \(Cash-Settled\) pursuant to the 2016 Valvoline Inc. Incentive Plan \(incorporated by reference to Exhibit 10.8 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on May 15, 2017\).](#)
- 10.11* - [Form of Restricted Stock Unit Award Agreement pursuant to the 2016 Valvoline Inc. Incentive Plan, as Amended, for awards granted after fiscal 2020.](#)
- 10.12 - [Valvoline Inc. Nonqualified Defined Contribution Plan \(incorporated by reference to Exhibit 10.4 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.13 - [Ashland Inc. Nonqualified Excess Benefit Pension Plan \(incorporated by reference to Exhibit 10.12 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on November 17, 2017\).](#)
- 10.14 - [Amendment to Ashland Inc. Nonqualified Excess Benefit Pension Plan, effective as of September 1, 2016 \(incorporated by reference to Exhibit 10.7 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.15 - [Amendment to Ashland Inc. Nonqualified Excess Benefit Pension Plan, effective as of September 30, 2016 \(incorporated by reference to Exhibit 10.9 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.16 - [Ashland Inc. Supplemental Early Retirement Plan for Certain Employees \("Ashland SERP"\) \(incorporated by reference to Exhibit 10.15 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on November 17, 2017\).](#)
- 10.17 - [Amendment to Ashland SERP, effective as of January 1, 2015 \(incorporated by reference to Exhibit 10.16 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on November 17, 2017\).](#)
- 10.18 - [Amendment to Ashland SERP, effective as of September 1, 2016 \(incorporated by reference to Exhibit 10.17 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on November 17, 2017\).](#)
- 10.19 - [Amendment to Ashland SERP, effective as of September 30, 2016 \(incorporated by reference to Exhibit 10.8 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.20 - [Form of CEO Change in Control Agreement \(incorporated by reference to Exhibit 10.1 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on May 15, 2017\).](#)
- 10.21 - [Form of Executive Officer Change in Control Agreement \(incorporated by reference to Exhibit 10.2 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on May 15, 2017\).](#)
- 10.22 - [Valvoline Change in Control Severance Plan \(incorporated by reference to Exhibit 10.3 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on May 15, 2017\).](#)
- 10.23 - [Valvoline Severance Pay Plan \(incorporated by reference to Exhibit 10.4 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on May 15, 2017\).](#)

- 10.24 - [Credit Agreement dated as of July 11, 2016, among Valvoline Finco One LLC, as Initial Borrower, The Bank of Nova Scotia, as Administrative Agent, Swing Line Lender and an L/C Issuer, Citibank, N.A., as Syndication Agent, and the Lenders from time to time party thereto \("Valvoline Credit Agreement"\) \(incorporated by reference to Exhibit 10.9 to Valvoline's Registration Statement on Form S-1 \(File No. 333-211720\) filed on September 12, 2016\).](#)
- 10.25 - [Amendment No. 1, dated as of September 21, 2016, to Valvoline Credit Agreement \(incorporated by reference to Exhibit 10.11 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.26 - [Amendment and Restatement Agreement, dated as of April 12, 2019, among Valvoline Inc. \("Valvoline"\), as the Borrower, the subsidiaries of Valvoline party thereto, The Bank of Nova Scotia, as Administrative Agent, and the Lenders party thereto \(including Exhibit A - Amended and Restated Credit Agreement, dated as of April 12, 2019, among Valvoline, the Administrative Agent, Citibank N.A., as Syndication Agent, and the other Lenders party thereto\) \(incorporated by reference to Exhibit 10.1 to Valvoline's Quarterly Report on Form 10-Q \(File No. 001-37884\) filed on May 2, 2019\).](#)
- 10.27 - [Transfer and Administration Agreement, dated as of November 29, 2016, among LEX Capital LLC, Valvoline LLC, and each other entity from time to time party hereto as an Originator, as Originators, Valvoline LLC, as initial Master Servicer, PNC Bank, National Association, as the Agent, a Letter of Credit Issuer, a Managing Agent and a Committed Investor, The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as a Managing Agent, an Administrator and a Committed Investor, Gotham Funding Corporation, as a Conduit Investor and an Uncommitted Investor, PNC Capital Markets, LLC, as Structuring Agent and the various investor groups, managing agents, letter of credit issuers and Administrators from time to time parties thereto \(incorporated by reference to Exhibit 10.1 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on December 2, 2016\).](#)
- 10.28 - [First Amendment to the Transfer and Administration Agreement, dated as of November 20, 2017, among Valvoline LLC, Lex Capital LLC, the Originators, the Investors, Letter of Credit Issuers, Managing Agents and Administrators party thereto, and PNC Bank National Association, as agent for the Investors \(incorporated by reference to Exhibit 10.1 to Valvoline's Current Report on Form 10-Q \(File No. 001-37884\) filed on February 8, 2018\).](#)
- 10.29 - [Second Amendment to the Transfer and Administration Agreement, dated as of January 31, 2020, among Valvoline LLC, Lex Capital LLC, the Originators, the Investors, Letter of Credit Issuers, Managing Agents and Administrators party thereto, and PNC Bank National Association, as agent for the Investors \(incorporated by reference to Exhibit 10.1 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on February 4, 2020\).](#)
- 10.30 - [Third Amendment to the Transfer and Administration Agreement, dated as of April 22, 2020, among Valvoline LLC, Lex Capital LLC, the Originators, the Investors, Letter of Credit Issuers, Managing Agents and Administrators party thereto, and PNC Bank National Association, as agent for the Investors \(incorporated by reference to Exhibit 10.1 to Valvoline's Current Report on Form 10-Q \(File No. 001-37884\) filed on May 7, 2020\).](#)
- 10.31 - [Sale Agreement, dated as of November 29, 2016, by and between Valvoline LLC and LEX Capital LLC \(incorporated by reference to Exhibit 10.2 to Valvoline Current Report on Form 8-K \(File No. 001-37884\) filed on December 2, 2016\).](#)
- 10.32 - [Parent Undertaking, dated as of November 29, 2016, by Valvoline Inc. in favor of PNC Bank National Association and the Secured Parties. \(incorporated by reference to Exhibit 10.3 to Valvoline's Current Report on Form 8-K \(File No. 001-37884\) filed on December 2, 2016\).](#)
- 10.33 - [Separation Agreement, dated as of September 22, 2016, by and between Ashland Global Holdings Inc. and Valvoline Inc. \(incorporated by reference to Exhibit 10.15 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.34 - [Tax Matters Agreement, dated as of September 22, 2016, by and between Ashland Global Holdings Inc. and Valvoline Inc. \(incorporated by reference to Exhibit 10.18 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 10.35 - [Employee Matters Agreement, dated as of September 22, 2016, by and between Ashland Global Holdings Inc. and Valvoline Inc. \(incorporated by reference to Exhibit 10.19 to Valvoline's Annual Report on Form 10-K \(File No. 001-37884\) filed on December 19, 2016\).](#)
- 21* - [List of Subsidiaries.](#)
- 22* - [List of Guarantor Subsidiaries.](#)

- 23.1* - [Consent of Ernst & Young LLP.](#)
- 24* - [Power of Attorney.](#)
- 31.1* - [Certification of Samuel J. Mitchell, Jr., Chief Executive Officer of Valvoline, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- 31.2* - [Certification of Mary E. Meixelsperger, Chief Financial Officer of Valvoline, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- 32* - [Certification of Samuel J. Mitchell, Jr., Chief Executive Officer of Valvoline, and Mary E. Meixelsperger, Chief Financial Officer of Valvoline, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- 101.INS - 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.
- 101.SCH - XBRL Taxonomy Extension Schema Document.
- 101.CAL - XBRL Taxonomy Extension Calculation Linkbase Document.
- 101.DEF - XBRL Taxonomy Extension Definition Linkbase Document.
- 101.LAB - XBRL Taxonomy Extension Label Linkbase Document.
- 101.PRE - XBRL Taxonomy Extension Presentation Linkbase Document.
- 104 - Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).

* Filed herewith.

SM Service mark, Valvoline or its subsidiaries, registered in various countries.

TM Trademark, Valvoline or its subsidiaries, registered in various countries.

† Trademark owned by a third party.

Upon written or oral request, a copy of the above exhibits will be furnished at cost.

VALVOLINE INC.
SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS
For the years ended September 30, 2020, 2019 and 2018
(In millions)

(A)	(B)	(C)		(D)	(E)
Description	Balance at beginning of period	Additions		Deductions	Balance at end of period
		Charged to expenses	Charged to other accounts		
Current allowance for doubtful accounts					
Year ended September 30, 2020	\$ 3	\$ 1	\$ (1)	\$ —	\$ 3
Year ended September 30, 2019	\$ 4	\$ —	\$ —	\$ (1)	\$ 3
Year ended September 30, 2018	\$ 3	\$ 1	\$ 1	\$ (1)	\$ 4
Allowances for loan losses					
Year ended September 30, 2020	\$ 2	\$ 1	\$ 1	\$ —	\$ 4
Year ended September 30, 2019	\$ —	\$ —	\$ 2	\$ —	\$ 2
Year ended September 30, 2018	\$ —	\$ —	\$ —	\$ —	\$ —
Inventory excess and obsolete reserves					
Year ended September 30, 2020	\$ 3	\$ 1	\$ —	\$ —	\$ 4
Year ended September 30, 2019	\$ 3	\$ —	\$ —	\$ —	\$ 3
Year ended September 30, 2018	\$ 3	\$ —	\$ —	\$ —	\$ 3
Deferred tax asset valuation allowance					
Year ended September 30, 2020	\$ 2	\$ 29	\$ —	\$ (1)	\$ 30
Year ended September 30, 2019	\$ 7	\$ —	\$ —	\$ (5)	\$ 2
Year ended September 30, 2018	\$ 8	\$ —	\$ —	\$ (1)	\$ 7

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.

VALVOLINE INC.
(Registrant)
By:
/s/ Mary E. Meixelsperger
Mary E. Meixelsperger
Chief Financial Officer
Date: November 24, 2020

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, in the capacities indicated, on November 24, 2020.

Signatures

/s/ Samuel J. Mitchell, Jr.

Samuel J. Mitchell, Jr.

/s/ Mary E. Meixelsperger

Mary E. Meixelsperger

/s/ Michael S. Ryan

Michael S. Ryan

*

Stephen F. Kirk

*

Gerald W. Evans, Jr.

*

Richard J. Freeland

*

Carol H. Kruse

*

Stephen E. Macadam

*

Vada O. Manager

*

Charles M. Sonsteby

*

Mary J. Twinem

Capacity

Chief Executive Officer and Director
(Principal Executive Officer)

Chief Financial Officer
(Principal Financial Officer)

Chief Accounting Officer and Controller
(Principal Accounting Officer)

Chairman of the Board and Director

Director

Director

Director

Director

Director

Director

Director

*By: /s/ Julie M. O'Daniel
Julie M. O'Daniel
Attorney-in-Fact

Date: November 24, 2020



which have not vested prior to such termination of employment will be forfeited, and any SARs which have vested prior to such termination and have not been exercised will remain exercisable to the extent set forth in Section 10(E) of the Plan. Notwithstanding the foregoing, the Compensation Committee may, in its sole discretion, provide for accelerated vesting and exercisability of the Award or any portion thereof at any time and for any reason; provided that the SARs may not be exercised after the expiration date set forth above.

In the event the Participant's employment is terminated due to death, Disability or a Qualifying Termination, a pro-rata portion of the SARs (determined by multiplying the number of SARs outstanding as of the date of termination by a fraction, the numerator of which is the number of days elapsed from the Grant Date to the date of such termination and the denominator of which is the total number of days from the Grant Date to the final Vesting Date, as set forth in the Vesting Schedule) shall become vested as of the date of such termination and any remaining SARs shall be forfeited. Any SARs which become vested upon termination due to death, Disability or a Qualifying Termination shall be exercisable to the extent set forth in Section 10(E) of the Plan.

The Award shall be governed by Section 12 of the Plan in the event of a Change in Control; provided that, without limiting Section 12(A)(3) of the Plan, the Award will not be considered to be assumed, continued, converted or replaced by the surviving or resulting entity in connection with a Change in Control unless, in each case as determined by the Compensation Committee in its sole discretion prior to such Change in Control, (1) the number and kind of shares or other securities underlying the Award, and the exercise price applicable thereto, are adjusted to prevent dilution of the Participant's rights hereunder and to preserve the intrinsic value and material terms and conditions of the Award as in effect prior to the Change in Control, and (2) immediately following the Change in Control the Award relates to shares of stock in the surviving or resulting entity which are publicly traded and listed on a national securities exchange.

The SARs and the Participant's rights under this Agreement may not be sold, assigned, transferred, pledged or otherwise encumbered.

Nothing contained in this Agreement or in the Plan shall confer upon the Participant any right to continue in the employment of, or remain in the service of, Valvoline or any of its Subsidiaries.

Information about the Participant and the Participant's participation in the Plan may be collected, recorded and held, used and disclosed by and among Valvoline, its Subsidiaries and any third-party Plan administrators as necessary for the purpose of managing and administering the Plan. The Participant understands that such processing of this information may need to be carried out by Valvoline, its affiliates and Subsidiaries and by third party administrators whether such persons are located within the Participant's country or elsewhere, including the United States of America. By accepting this Award, the Participant consents to the processing of information relating to the Participant and the Participant's participation in the Plan in any one or more of the ways referred to above.

The Participant consents and agrees to electronic delivery of any documents that Valvoline may elect to deliver (including, but not limited to, prospectuses, prospectus supplements, grant or award notifications and agreements, account statements, annual and quarterly reports, and all other forms of communications) in connection with this and any other award made or offered under the Plan. The Participant understands that, unless earlier revoked by the Participant by giving written notice to Valvoline at 100 Valvoline Way, Lexington, KY 40509, Attention: Stock

Personal and Confidential



Plan Administrator, this consent shall be effective for the duration of the Award. The Participant also understands that the Participant shall have the right at any time to request that Valvoline deliver written copies of any and all materials referred to above at no charge.

In consideration of this Award, the Participant agrees that, during the Participant's employment and the twenty-four (24) month period following the Participant's termination of employment for any reason, without the prior written consent of Valvoline, the Participant will not:

- (i) engage directly or indirectly in any manner or capacity as principal, agent, partner, officer, director, employee or otherwise in any business or activity competitive with the business conducted by Valvoline or any of its Subsidiaries; or
- (ii) perform any act or engage in any activity that is detrimental to the best interests of Valvoline or any of its Subsidiaries, including, without limitation:
 - (a) solicit or encourage any existing or former employee, director, contractor, consultant, customer or supplier of Valvoline or any of its Subsidiaries to terminate his, her or its relationship with Valvoline or any of its Subsidiaries for any reason; or
 - (b) disclose proprietary or confidential information of Valvoline or any of its Subsidiaries to third parties or use any such proprietary or confidential information for the benefit of anyone other than Valvoline and its Subsidiaries (clauses (i) and (ii), the "Participant Covenants");

provided, however, that clause (ii) above shall not be breached in the event that the Participant discloses proprietary or confidential information to the Securities and Exchange Commission, to the extent necessary to report suspected or actual violations of U.S. securities laws, or the Participant's disclosure of proprietary or confidential information is protected under the whistleblower provisions of any applicable law or regulation. Furthermore, Participant is advised that if Participant discloses proprietary or confidential information of Valvoline that constitutes a trade secret to which the U.S. Defend Trade Secrets Act (18 USC Section 1833(b)) applies, then Participant shall not be held criminally or civilly liable under any federal or state trade secret law, or considered to be in violation of the terms of this Agreement, where Participant's disclosure is made solely for the purpose of reporting or investigating a suspected violation of law and in confidence to a federal, state, or local government official, whether directly or indirectly, or to an attorney; or where Participant's disclosure is made in a complaint or other document filed in a lawsuit or other proceeding against Valvoline and such filing is made under seal. The Participant understands that if he or she makes a disclosure of proprietary or confidential information that is covered above, he or she is not required to inform Valvoline, in advance or otherwise, that such disclosure(s) has been made. Nothing in this Agreement shall prohibit the Participant from maintaining the confidentiality of a claim with a governmental agency that is responsible for enforcing a law, or cooperating, participating or assisting in any governmental or regulatory entity investigation or proceeding.

Notwithstanding any other provision of the Plan or this Agreement to the contrary, but subject to any applicable laws to the contrary, the Participant agrees that in the event the Participant fails to comply or otherwise breaches any of the Participant Covenants either during the Participant's employment or within twenty-four (24) months following the Participant's termination of employment for any reason, Valvoline may: (i) cancel this Award; (ii) eliminate or reduce the

Personal and Confidential



amount of any compensation, benefit, or payment otherwise payable by Valvoline or any of its Subsidiaries (either directly or under any employee benefit or compensation plan, agreement, or arrangement, except to the extent such compensation, benefit or payment constitutes deferred compensation under Section 409A of the Internal Revenue Code (“Section 409A”) and such elimination or reduction would trigger a tax or penalty under Section 409A) to or on behalf of the Participant in an amount up to the total amount paid or payable to the Participant under this Agreement; and/or (iii) require the Participant to pay Valvoline an amount up to the total amount paid to the Participant under this Agreement, in each case together with the amount of Valvoline’s court costs, attorney fees, and other costs and expenses incurred in connection therewith. For purposes of this paragraph, the total amount paid under this Agreement shall be determined based on the closing stock price of Common Stock on the date or dates any shares of Common Stock are delivered in accordance with this Agreement, as determined by the Compensation Committee.

This Award of Stock Appreciation Rights is subject to the Participant’s on-line acceptance of the terms and conditions of this Agreement through the Fidelity website.

By accepting the terms and conditions of this Agreement, the Participant acknowledges receipt of a copy of the Plan, Prospectus, and Valvoline’s most recent Annual Report and Proxy Statement (the “Prospectus Information”). The Participant represents that he or she is familiar with the terms and provisions of the Prospectus Information and hereby accepts this Award on the terms and conditions set forth herein and in the Plan, and acknowledges that he or she had the opportunity to obtain independent legal advice at his or her expense prior to accepting this Award.

IN WITNESS WHEREOF, Valvoline has caused this instrument to be executed and delivered effective as of the day and year first above written.

Valvoline Inc.

By: _____
Name: _____
Acceptance Date: _____

Personal and Confidential



in its sole discretion prior to such Change in Control, (1) the number and kind of shares or other securities underlying the Award are adjusted to prevent dilution of the Participant's rights hereunder and to preserve the intrinsic value and material terms and conditions of the Award as in effect prior to the Change in Control, and (2) immediately following the Change in Control the Award relates to shares of stock in the surviving or resulting entity which are publicly traded and listed on a national securities exchange.

On each date that cash dividends are paid to holders of Common Stock, the Participant will be credited with a number of additional RSUs equal to (1) the product of (A) the number of then-outstanding RSUs held by the Participant as of the date of record for such dividend multiplied by (B) the per share cash dividend amount, divided by (2) the closing stock price of Common Stock on the NYSE Composite Tape on the date of record for such dividend. Such additional RSUs will be subject to the same vesting conditions and restrictions as the underlying RSUs to which they relate and shall be subject to all the terms and conditions of this Agreement and the Plan.

The RSUs and the Participant's rights under this Agreement may not be sold, assigned, transferred, pledged or otherwise encumbered.

Nothing contained in this Agreement or in the Plan shall confer upon the Participant any right to continue in the employment of, or remain in the service of, Valvoline or any of its Subsidiaries. Information about the Participant and the Participant's participation in the Plan may be collected, recorded and held, used and disclosed by and among Valvoline, its Subsidiaries and any third party Plan administrators as necessary for the purpose of managing and administering the Plan. The Participant understands that such processing of this information may need to be carried out by Valvoline, its affiliates and Subsidiaries and by third party administrators whether such persons are located within the Participant's country or elsewhere, including the United States of America. By accepting this Award, the Participant consents to the processing of information relating to the Participant and the Participant's participation in the Plan in any one or more of the ways referred to above.

The Participant consents and agrees to electronic delivery of any documents that Valvoline may elect to deliver (including, but not limited to, prospectuses, prospectus supplements, grant or award notifications and agreements, account statements, annual and quarterly reports, and all other forms of communications) in connection with this and any other award made or offered under the Plan. The Participant understands that, unless earlier revoked by the Participant by giving written notice to Valvoline at 100 Valvoline Way; Lexington, KY 40509; Attention: Stock Plan Administrator, this consent shall be effective for the duration of the Award. The Participant also understands that the Participant shall have the right at any time to request that Valvoline deliver written copies of any and all materials referred to above at no charge.

In consideration of this Award, the Participant agrees that, during the Participant's employment and the twenty-four (24) month period following the Participant's termination of employment for any reason, without the prior written consent of Valvoline, the Participant will not:

- (i) engage directly or indirectly in any manner or capacity as principal, agent, partner, officer, director, employee or otherwise in any business or activity competitive with the business conducted by Valvoline or any of its Subsidiaries; or
- (ii) perform any act or engage in any activity that is detrimental to the best interests of Valvoline or any of its Subsidiaries, including, without limitation:

Personal and Confidential



- (a) solicit or encourage any existing or former employee, director, contractor, consultant, customer or supplier of Valvoline or any of its Subsidiaries to terminate his, her or its relationship with Valvoline or any of its Subsidiaries for any reason; or
- (b) disclose proprietary or confidential information of Valvoline or any of its Subsidiaries to third parties or use any such proprietary or confidential information for the benefit of anyone other than Valvoline and its Subsidiaries (clauses (i) and (ii), the "Participant Covenants");

provided, however, that clause (ii) above shall not be breached in the event that the Participant discloses proprietary or confidential information to the Securities and Exchange Commission, to the extent necessary to report suspected or actual violations of U.S. securities laws, or the Participant's disclosure of proprietary or confidential information is protected under the whistleblower provisions of any applicable law or regulation. Furthermore, Participant is advised that if Participant discloses proprietary or confidential information of Valvoline that constitutes a trade secret to which the U.S. Defend Trade Secrets Act (18 USC Section 1833(b)) applies, then Participant shall not be held criminally or civilly liable under any federal or state trade secret law, or considered to be in violation of the terms of this Agreement, where Participant's disclosure is made solely for the purpose of reporting or investigating a suspected violation of law and in confidence to a federal, state, or local government official, whether directly or indirectly, or to an attorney; or where Participant's disclosure is made in a complaint or other document filed in a lawsuit or other proceeding against Valvoline and such filing is made under seal. The Participant understands that if he or she makes a disclosure of proprietary or confidential information that is covered above, he or she is not required to inform Valvoline, in advance or otherwise, that such disclosure(s) has been made. Nothing in this Agreement shall prohibit the Participant from maintaining the confidentiality of a claim with a governmental agency that is responsible for enforcing a law, or cooperating, participating or assisting in any governmental or regulatory entity investigation or proceeding.

Notwithstanding any other provision of the Plan or this Agreement to the contrary, but subject to any applicable laws to the contrary, the Participant agrees that in the event the Participant fails to comply or otherwise breaches any of the Participant Covenants either during the Participant's employment or within twenty-four (24) months following the Participant's termination of employment for any reason, Valvoline may: (i) cancel this Award; (ii) eliminate or reduce the amount of any compensation, benefit, or payment otherwise payable by Valvoline or any of its Subsidiaries (either directly or under any employee benefit or compensation plan, agreement, or arrangement, except to the extent such compensation, benefit or payment constitutes deferred compensation under Section 409A of the Internal Revenue Code ("Section 409A") and such elimination or reduction would trigger a tax or penalty under Section 409A) to or on behalf of the Participant in an amount up to the total amount paid or payable to the Participant under this Agreement; and/or (iii) require the Participant to pay Valvoline an amount up to the total amount paid to the Participant under this Agreement, in each case together with the amount of Valvoline's court costs, attorney fees, and other costs and expenses incurred in connection therewith. For purposes of this paragraph, the total amount paid under this Agreement shall be determined based on the closing stock price of Common Stock on the date or dates any shares of Common Stock are delivered in accordance with this Agreement, as determined by the Compensation Committee.

Personal and Confidential



This Award of RSUs is subject to the Participant's on-line acceptance of the terms and conditions of this Agreement through the Fidelity website.

By accepting the terms and conditions of this Agreement, the Participant acknowledges receipt of a copy of the Plan, Prospectus, and Valvoline's most recent Annual Report and Proxy Statement (the "Prospectus Information"). The Participant represents that he or she is familiar with the terms and provisions of the Prospectus Information and hereby accepts this Award on the terms and conditions set forth herein and in the Plan, and acknowledges that he or she had the opportunity to obtain independent legal advice at his or her expense prior to accepting this Award.

IN WITNESS WHEREOF, Valvoline has caused this instrument to be executed and delivered effective as of the day and year first above written.

Valvoline Inc.

By: _____
Name: _____
Acceptance Date: _____

Personal and Confidential

List of Subsidiaries of the Registrant

Subsidiaries of Valvoline Inc. at September 30, 2020, included the companies listed below.

<u>Name</u>	<u>Jurisdiction of Incorporation</u>
Ellis Enterprises B.V.	Netherlands
Ellis Enterprises East doo Kruševac	Serbia
Funding Corp. I	Delaware
Integral Defense, LLC	Delaware
LEX Capital LLC	Delaware
Lubricantes Andinos "Lubrian S. A."	Ecuador
Lubrival S. A.	Ecuador
OCH International, Inc.	Oregon
OCHI Advertising Fund LLC	Oregon
OCHI Holdings II LLC	Oregon
OCHI Holdings LLC	Oregon
PT. Valvoline Lubricants and Chemicals Indonesia	Indonesia
Qingdao Master Too Valvoline Automotive Services Co., Ltd.	China
Relocation Properties Management LLC	Delaware
Shanghai VC Lubricating Oil Co., Ltd.	China
VCA Solutions, LLC	Delaware
V C Lubricating Oil Co. Ltd.	Hong Kong
Valvoline (Australia) Pty. Limited	Australia
Valvoline (Deutschland) GmbH	Germany
Valvoline (Shanghai) Chemical Co., Ltd	China
Valvoline (Thailand) Ltd.	Thailand
Valvoline (Zhangjiagang) Lubricants Co., Ltd.	China
Valvoline Branded Finance, Inc.	Delaware
Valvoline Canada Corp.	Nova Scotia
Valvoline Canada Holdings B.V.	Netherlands
Valvoline Canadian Franchising Corp.	British Columbia
Valvoline Cummins Argentina S.A.	Argentina
Valvoline Cummins Private Limited	India
Valvoline de Colombia S.A.S.	Colombia
Valvoline Eurasia LLC	Russian Federation
Valvoline Europe Holdings LLC	Delaware

Valvoline Holdings B.V.	Netherlands
Valvoline Holdings Pte. Ltd.	Singapore
Valvoline Indonesia Holdings LLC	Delaware
Valvoline Instant Oil Change Franchising, Inc.	Delaware
Valvoline International de Mexico, S. de R.L. de C.V.	Mexico
Valvoline International Holdings Inc.	Delaware
Valvoline International Servicios de Mexico, S. de R.L. de C.V.	Mexico
Valvoline International, Inc.	Delaware
Valvoline Investments B.V.	Netherlands
Valvoline Italy S.r.l.	Italy
Valvoline Junior Holdings LLC	Delaware
Valvoline Licensing and Intellectual Property LLC	Delaware
Valvoline LLC	Delaware
Valvoline Lubricants & Solutions India Private Limited	India
Valvoline New Zealand Limited	New Zealand
Valvoline Poland Sp. z o.o.	Poland
Valvoline Pte. Ltd.	Singapore
Valvoline Quick Lube Corp.	British Columbia
Valvoline South Africa Proprietary Limited	South Africa
Valvoline Spain, S.L.	Spain
Valvoline UK Limited	United Kingdom
Valvoline US LLC	Delaware
VIQC Funding, Inc.	Delaware

List of Guarantor Subsidiaries

Each of the following wholly-owned subsidiaries of Valvoline Inc. ("Valvoline") has fully and unconditionally guaranteed the 4.375% Senior Notes due 2025 issued by Valvoline:

Name of Guarantor Subsidiary	Jurisdiction of Incorporation or Organization
Valvoline US LLC	Delaware
Valvoline LLC	Delaware
Valvoline Licensing and Intellectual Properties LLC	Delaware
Valvoline Branded Finance Inc.	Delaware
Valvoline International Holding Inc.	Delaware
Valvoline Instant Oil Change Franchising, Inc.	Delaware
Relocation Properties Management LLC	Delaware
VIOC Funding, Inc.	Delaware
OCH International, Inc.	Oregon
Valvoline International, Inc.	Delaware
Funding Corp. I	Delaware
OCHI Advertising Fund LLC	Oregon
OCHI Holdings LLC	Oregon
OCHI Holdings II LLC	Oregon

Consent of Independent Registered Public Accounting Firm

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

- (1) Registration Statement (Form S-4 No. 333-221652) of Valvoline Inc.,
- (2) Registration Statement (Form S-4 No. 333-238971 and Form S-4/A No. 333-238971) of Valvoline Inc.,
- (3) Registration Statement (Form S-8 No. 333-225081) pertaining to the Valvoline Inc. Employee Stock Purchase Plan,
- (4) Registration Statement (Form S-8 No. 333-225079) pertaining to the Valvoline 401(k) Plan,
- (5) Registration Statement (Form S-8 No. 333-218580) pertaining to the Inducement Restricted Stock Award,
- (6) Registration Statement (Form S-8 No. 333-217887) pertaining to the Valvoline Inc. 2016 Deferred Compensation Plan for Employees and the Valvoline 401(k) Plan,
- (7) Registration Statement (Form S-8 No. 333-215230) pertaining to the 2016 Deferred Compensation Plan for Employees, and
- (8) Registration Statement (Form S-8 No. 333-213898) pertaining to the 2016 Valvoline Incentive Plan and the 2016 Deferred Compensation Plan for Non-Employee Directors;

of our reports dated November 24, 2020, with respect to the consolidated financial statements and schedule of Valvoline Inc. and Consolidated Subsidiaries and the effectiveness of internal control over financial reporting of Valvoline Inc. and Consolidated Subsidiaries included in this Annual Report (Form 10-K) of Valvoline Inc. for the year ended September 30, 2020.

/s/ Ernst & Young LLP

Cincinnati, Ohio
November 24, 2020

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each of the undersigned Directors of VALVOLINE INC., a Kentucky corporation, which is about to file an Annual Report on Form 10-K with the Securities and Exchange Commission under the provisions of the Securities Exchange Act of 1934, as amended, hereby constitutes and appoints SAMUEL J. MITCHELL, JR., MARY E. MEIXELSPERGER, and JULIE M. O'DANIEL, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power to act without the others to sign and file such Annual Report and the exhibits thereto and any and all other documents in connection therewith, and any such amendments thereto, with the Securities and Exchange Commission, and to do and perform any and all acts and things requisite and necessary to be done in connection with the foregoing as fully as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

Dated: November 24, 2020

/s/ Stephen F. Kirk

Stephen F. Kirk
Chairman of the Board and Director

/s/ Gerald W. Evans, Jr.

Gerald W. Evans, Jr.
Director

/s/ Richard J. Freeland

Richard J. Freeland
Director

/s/ Carol H. Kruse

Carol H. Kruse
Director

/s/ Stephen E. Macadam

Stephen E. Macadam
Director

/s/ Vada O. Manager

Vada O. Manager
Director

/s/ Charles M. Sonsteby

Charles M. Sonsteby
Director

/s/ Mary J. Twinem

Mary J. Twinem
Director

CERTIFICATION

I, Samuel J. Mitchell, Jr., certify that:

1. I have reviewed this Annual Report on Form 10-K of Valvoline Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the Audit Committee of the registrant's Board of Directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 24, 2020

/s/ Samuel J. Mitchell, Jr.

Samuel J. Mitchell Jr.

Chief Executive Officer and Director
(Principal Executive Officer)

CERTIFICATION

I, Mary E. Meixelsperger, certify that:

1. I have reviewed this Annual Report on Form 10-K of Valvoline Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the Audit Committee of the registrant's Board of Directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 24, 2020

/s/ Mary E. Meixelsperger

Mary E. Meixelsperger
Chief Financial Officer
(Principal Financial Officer)

VALVOLINE INC.

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

In connection with the Annual Report of Valvoline Inc. (the "Company") on Form 10-K for the period ended September 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned, Samuel J. Mitchell, Jr., Chief Executive Officer of the Company, and Mary E. Meixelsperger, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ Samuel J. Mitchell, Jr.

Samuel J. Mitchell, Jr.
Chief Executive Officer and Director
November 24, 2020

/s/ Mary E. Meixelsperger

Mary E. Meixelsperger
Chief Financial Officer
November 24, 2020