



Building on a Long-Term Vision for the Future

FINANCIAL HIGHLIGHTS

	2019	2018
	<i>in thousands, except share and per-share amounts</i>	

OPERATIONS:

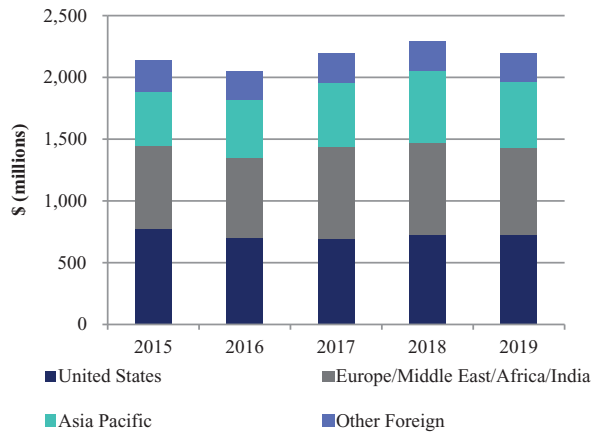
Net sales	\$2,190,295	\$2,289,675
Petroleum additives operating profit	\$ 359,228	\$ 311,019
Net income	\$ 254,286	\$ 234,734
Basic and diluted earnings per share	\$ 22.73	\$ 20.34

FINANCIAL POSITION AND OTHER DATA:

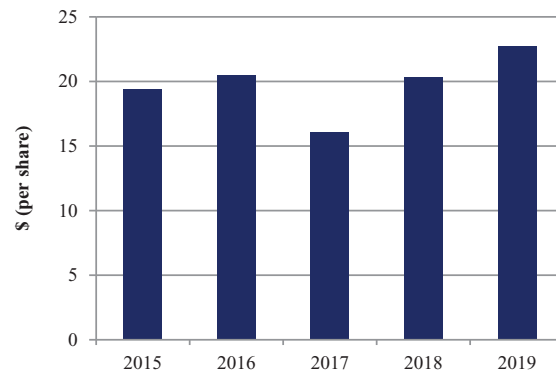
Cash and cash equivalents	\$ 144,397	\$ 73,040
Long-term debt	\$ 642,941	\$ 770,999
Shareholders' equity	\$ 683,098	\$ 489,907
Shares repurchased during year	0	603,449

The following graphs present several financial measures, including EBITDA. EBITDA is a non-GAAP financial measure and is defined as income before the deduction of interest and financing expenses, income tax expense, depreciation, and amortization. While EBITDA is not required by or presented in accordance with United States generally accepted accounting principles (GAAP), we believe this financial measure enhances understanding of our financial performance and period to period comparability. EBITDA should not be considered an alternative to net income determined under GAAP. A reconciliation of net income to EBITDA is presented on the following page.

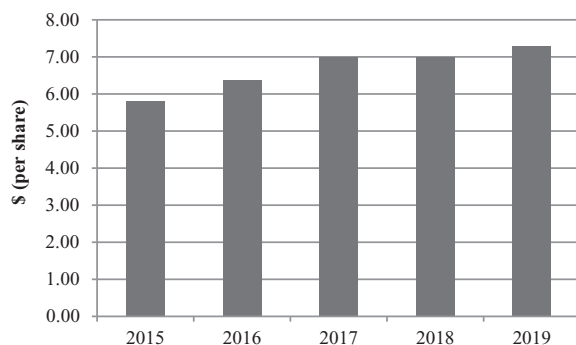
Net Sales by Geographic Area



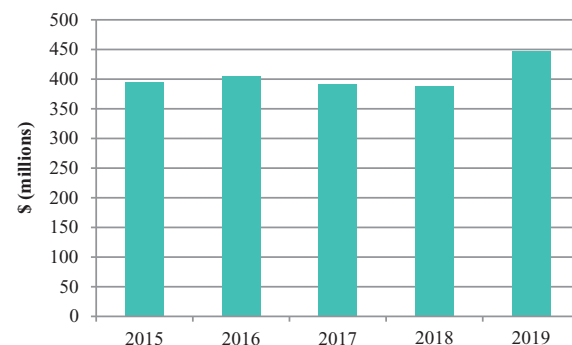
Earnings Per Share



Dividends Per Share



EBITDA



NON-GAAP FINANCIAL INFORMATION*(In thousands, unaudited)*

	Years Ended December 31,				
	2015	2016	2017	2018	2019
Net Income	\$238,603	\$243,441	\$190,509	\$234,734	\$254,286
Add:					
Interest and financing expenses, net	14,652	16,785	21,856	26,723	29,241
Income tax expense	100,368	99,767	124,933	55,551	77,304
Depreciation and amortization	41,178	43,808	54,240	70,618	86,421
EBITDA	<u>\$394,801</u>	<u>\$403,801</u>	<u>\$391,538</u>	<u>\$387,626</u>	<u>\$447,252</u>

To Our Shareholders:

I am pleased to report that 2019 was a successful year for our company. The team again made significant strides on our operating performance and delivering on our long-range strategy.

Our Petroleum Additives business, managed by Afton Chemical Corporation, continued to realize the benefit of its “One Team, One Goal” strategy. We were successful in restoring operating margins back into the range we enjoyed before the raw material escalations we experienced over the last few years. The team also continued to maintain measured cost control and make internal progress on efficiencies across the enterprise. The investments made over the past five years in global supply infrastructure, including production facilities in Singapore and Mexico, continue to reap benefits relative to our operating performance. Our strategy remained steadfast in 2019 as we continued to focus on investments for the long-term future of our business.

Our “One Team, One Goal” philosophy also embodies the focus on our “Actively Caring” safety efforts across the organization. In 2019, we had a 40% improvement in our recordable injury rate and had zero serious injuries or process safety incidents. In addition, six of our operating sites achieved the “Vision of Zero” safety performance in 2019, with zero incidents across a full range of safety indicators.

We are proud that our company and people make the world a better place. Working with our customers and OEM partners, our products make a positive contribution to society through: reducing emissions, improving fuel economy, reducing the use of fossil fuels, and increasing the overall efficiency of modern-day transportation. We remained focused on research and development efforts in the Petroleum Additives business and making our solutions more impactful as “part of the solution.” We are committed to the excellence that our products can provide through positive contributions to the world in which we live. This constant focus gives me great confidence in our abilities to serve our customers well into the future as our industry continues to have sound fundamentals.

Cash flow generation continues to be a priority and focus of the team. We have a stated strategy and continue to operate under our long-standing principles for capital deployment. In 2019 we had another year of strong cash flow, while maintaining a very modest leverage of 1.1X net debt/EBITDA. We returned \$82 million to our shareholders through dividends, funded capital expenditures of \$59 million and repaid \$123 million of borrowings on our revolving credit facility.

Thanks to the good work of our 2,000+ team members, we enter 2020 well positioned for the future and look to continue managing the business for the long term as our marketplace evolves. Our business is performing well, and our balance sheet is strong. We appreciate the support of all our stakeholders, and so we say “Thank You” to our employees, customers and shareholders for all that you do, and I look forward to another great year ahead.

Sincerely,

Thomas E. Gottwald
Chairman and CEO

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

FORM 10-K

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

For the fiscal year ended December 31, 2019

or

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

For the transition period from _____ to
Commission file number 1-32190

NEWMARKET CORPORATION

Incorporated pursuant to the Laws of the Commonwealth of Virginia

Internal Revenue Service Employer Identification No. 20-0812170

330 South Fourth Street

Richmond, Virginia 23219-4350

804-788-5000

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, without par value	NEU	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"/>	(Do not check if a smaller reporting company)
	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 is a shell company (as defined in Rule 12b-2 of the Act). Yes No

Aggregate market value of voting stock held by non-affiliates of the registrant as of June 28, 2019 (the last business day of the registrant's most recently completed second fiscal quarter): \$3,221,673,182*

Number of shares of Common Stock outstanding as of January 31, 2020: 11,188,173

DOCUMENTS INCORPORATED BY REFERENCE

Portions of NewMarket Corporation's definitive Proxy Statement for its 2020 Annual Meeting of Shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934 are incorporated by reference into Part III of this Annual Report on Form 10-K.

* In determining this figure, an aggregate of 3,152,826 shares of Common Stock as beneficially owned by Bruce C. Gottwald and members of his immediate family have been excluded and treated as shares held by affiliates. See Item 12. The aggregate market value has been computed on the basis of the closing price on the New York Stock Exchange on June 28, 2019.

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Form 10-K
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PART I

ITEM 1. BUSINESS

NewMarket Corporation (NewMarket) (NYSE: NEU) is a holding company and is the parent company of Afton Chemical Corporation (Afton), Ethyl Corporation (Ethyl), NewMarket Services Corporation (NewMarket Services), and NewMarket Development Corporation (NewMarket Development).

Each of our subsidiaries manages its own assets and liabilities. Afton manufactures and sells petroleum additives, while Ethyl represents the sale of tetraethyl lead (antiknock compounds) in North America, as well as certain contracted manufacturing and services. NewMarket Development manages the property that we own in Virginia. NewMarket Services provides various administrative services to NewMarket, Afton, Ethyl, and NewMarket Development. NewMarket Services departmental expenses and other expenses are billed to each subsidiary pursuant to services agreements between the companies.

References in this Annual Report on Form 10-K to “we,” “us,” “our,” and “NewMarket” are to NewMarket Corporation and its consolidated subsidiaries, unless the context indicates otherwise.

As a specialty chemicals company, Afton develops and manufactures highly formulated lubricant and fuel additive packages and markets and sells these products worldwide. Afton is one of the largest lubricant and fuel additives companies in the world. Lubricant and fuel additives are necessary products for efficient and reliable operation of vehicles and machinery. From custom-formulated additive packages to market-general additives, we believe Afton provides customers with products and solutions that make engines run smoother, machines last longer, and fuels burn cleaner.

Through an open, flexible, and collaborative style, Afton works closely with its customers to understand their business and help them meet their goals. This style has allowed Afton to develop long-term relationships with its customers in every major region of the world, which Afton serves through our manufacturing facilities across the globe.

We have operations in North America, Europe, Asia, and South America. The economies are generally stable in the countries where we do most of our business, although many of those countries have experienced economic downturns in the past. In countries with more political or economic uncertainty, we generally minimize our risk of loss by utilizing U.S. Dollar-denominated transactions, letters of credit, and prepaid transactions. Further information on our operations in the various geographic areas is in Note 4 of the Notes to Consolidated Financial Statements.

With over 500 employees in research, development, and testing, Afton is dedicated to developing additive formulations that are tailored to our customers’ and the end-users’ specific needs. Afton’s portfolio of technologically-advanced, value-added products allows it to provide a full range of products, services, and solutions to its customers.

Ethyl provides contracted manufacturing and services to Afton and to third parties, and is a marketer of antiknock compounds in North America.

NewMarket Development manages the property that we own in Richmond, Virginia consisting of approximately 57 acres. Our corporate offices are included in this acreage, as well as a research and testing facility, and several acres dedicated to other uses. We are currently exploring various development opportunities for portions of the property as the demand warrants. This effort is ongoing in nature, as we have no specific timeline for any future developments.

We were incorporated in the Commonwealth of Virginia in 2004. Our principal executive offices are located at 330 South Fourth Street, Richmond, Virginia, and our telephone number is (804) 788-5000. We employed 2,118 people at the end of 2019.

Business Segments

Our business is composed of one segment, petroleum additives, which is primarily represented by Afton. The antiknock compounds business of Ethyl is reflected in the “All other” category. Each of these is discussed below.

Petroleum Additives—Petroleum additives are used in lubricating oils and fuels to enhance their performance in machinery, vehicles, and other equipment. We manufacture chemical components that are selected to perform one or more specific functions and combine those chemicals with other chemicals or components to form additive packages for use in specified end-user applications. The petroleum additives market is a global marketplace, with customers ranging from large, integrated oil companies to national, regional, and independent companies.

We believe our success in the petroleum additives market is largely due to our ability to deliver value to our customers through our products and our open, flexible, and collaborative working style. We accomplish this by understanding what our customers value and by applying our technical capabilities, formulation expertise, broadly differentiated product solutions, and global supply capabilities to satisfy the customers’ needs. We invest significantly in research and development in order to meet our customers’ needs and to adapt to the rapidly changing environment for new and improved products and services.

We view the petroleum additives marketplace as being comprised of two broad product applications: lubricant additives and fuel additives. Lubricant additives are highly formulated chemical solutions that, when blended with base fluids, improve the efficiency, durability, performance, and functionality of mineral oils, synthetic oils, and biodegradable fluids, thereby enhancing the performance of machinery and engines. Fuel additives are chemical components that help oil refiners meet fuel specifications or formulated packages that improve the performance of gasoline, diesel, biofuels, and other fuels, resulting in lower operating costs, improved vehicle performance, and reduced emissions.

Lubricant Additives

Lubricant additives are essential ingredients for making lubricating oils. Lubricant additives are used in a wide variety of vehicle and industrial applications, including engine oils, transmission fluids, off-road powertrain and hydraulic systems, gear oils, hydraulic oils, and turbine oils, and virtually any other application where metal-to-metal moving parts are utilized. Lubricant additives are organic and synthetic chemical components that enhance wear protection, prevent deposits, and protect against the hostile operating environment of an engine, transmission, axle, hydraulic pump, or industrial machine.

Lubricants are widely used in operating machinery from transportation vehicles to heavy industrial equipment. Lubricants provide a layer of protection between moving mechanical parts. Without this layer of protection, the normal functioning of machinery would not occur. Effective lubricants reduce downtime and increase efficiency. Specifically, lubricants serve the following main functions:

- friction reduction—Friction is reduced by maintaining a thin film of lubricant between moving surfaces, preventing them from coming into direct contact with one another and reducing wear on moving machinery, thereby providing longer life and operational efficiency.
- heat removal—Lubricants act as coolants by removing heat resulting either from friction or through contact with other, higher temperature materials.
- containment of contaminants—Lubricants function by carrying contaminants away from the machinery and neutralizing the harmful impact of the by-products created by combustion.

The functionality of lubricants is created through an exact balance between a base fluid and performance enhancing additives. This balance is the goal of effective formulations achieved by experienced research and development professionals. We offer a full line of lubricant additive packages, each of which is composed of

component chemicals specially selected to perform desired functions. We manufacture most of the chemical components and blend these components to create formulated additive packages designed to meet industry and customer specifications. Lubricant additive components are generally classified based upon their intended functionality, including:

- detergents, which clean moving parts of engines and machines, suspend oil contaminants and combustion by-products, and absorb acidic combustion products;
- dispersants, which serve to inhibit the formation of sludge and particulates;
- extreme pressure/antiwear agents, which reduce wear on moving engine and machinery parts;
- viscosity index modifiers, which improve the viscosity and temperature characteristics of lubricants and help the lubricant flow evenly to all parts of an engine or machine; and
- antioxidants, which prevent oil from degrading over time.

We are one of the leading global suppliers of specially formulated lubricant additives that combine some or all of the components described above to develop our products. Our products are highly formulated, complex chemical compositions derived from extensive research and testing to ensure all additive components work together to provide the intended results. Our products are engineered to meet specifications prescribed by either the industry or a specific customer. Purchasers of lubricant additives tend to be integrated oil companies or independent compounders/blenders. We make no sales directly to end-users or to original equipment manufacturers (OEMs).

We view our participation in the lubricant marketplace in three primary areas: engine oil additives, driveline additives, and industrial additives. Our view is not necessarily the same way others view the market.

Engine Oil Additives—The largest submarket within the lubricant additives marketplace is engine oil additives which consists of additives designed for passenger cars, motorcycles, on and off-road heavy duty commercial equipment, locomotives, and large engines in ocean-going vessels. We estimate engine oil additives represent approximately 70% of the overall lubricant additives market volume.

The engine oil market's primary customers include consumers, fleet owners, mining and construction companies, farmers, railroads, shipping companies, service dealers, and OEMs. The primary functions of engine oil additives are to reduce friction, prevent wear, control formation of sludge and oxidation, and prevent rust. Engine oil additives are typically sold to lubricant manufacturers who combine them with a base oil fluid to meet internal, industry, and OEM specifications.

Key drivers of engine oil additives demand are the number of vehicles on the road, total vehicle miles driven, fuel economy, the average age of vehicles on the road, drain intervals, engine and crankcase size, changes in engine design, and temperature and specification changes driven by the OEMs. The extension of drain intervals has generally offset increased demand due to higher vehicle population, new hardware, and more miles driven. Other key drivers include industrial production rates, agricultural output, mining and construction output, environmental regulations, and infrastructure investments of commercial companies. Afton offers products that enhance the performance of mineral, part-synthetic, and fully-synthetic engine oils.

Driveline Additives—The driveline additives submarket is comprised of additives designed for products such as transmission fluids, axle fluids, and off-road powertrain fluids. This submarket shares in the 30% of the market not covered by engine oil additives. Transmission fluids primarily serve as the power transmission and heat transfer medium in the area of the transmission where the torque of the drive shaft is transferred to the gears of the vehicle. Axle fluids lubricate gears and bearings in axles, and powertrain fluids are used in off-highway powertrain and hydraulic systems. Other products in this area include power steering fluids, shock absorber fluids, gear oils, and lubricants for heavy machinery. These products must conform to highly prescribed specifications developed by vehicle OEMs for specific models or designs. These additives are generally sold to

oil companies for ultimate sale to vehicle OEMs for new vehicles (factory-fill), service dealers for aftermarket servicing (service-fill), retailers, and distributors.

Key drivers of the driveline additives marketplace are the number of vehicles manufactured, total number of vehicles in operation, drain intervals for transmission fluids and axle fluids, changes in engine and transmission design and temperatures, and specification changes driven by the OEMs.

Industrial Additives—The industrial additives submarket is comprised of additives designed for products for industrial applications such as hydraulic fluids, grease, industrial gear fluids, and industrial specialty applications, such as turbine oils. This submarket also shares in the 30% of the market not covered by engine oil additives. These products must conform to industry specifications, OEM requirements, and/or application and operating environment demands. Industrial additives are generally sold to oil companies, service dealers for after-market servicing, and distributors.

Key drivers of the industrial additives marketplace are gross domestic product levels and industrial production.

Fuel Additives

Fuel additives are chemical compounds that are used to improve both the oil refining process and the performance of gasoline, diesel, biofuels, and other fuels. Benefits of fuel additives in the oil refining process include reduced use of crude oil, lower processing costs, and improved fuel storage properties. Fuel performance additives enhance fuel economy, improve ignition and combustion efficiency, reduce emission particulates, maintain engine cleanliness, and protect against deposits in fuel injectors, intake valves, and the combustion chamber. Our fuel additives are extensively tested and designed to meet stringent industry, government, OEM, and individual customer requirements.

Many different types of additives are used in fuels. Their use is generally determined by customer, industry, OEM, and government specifications, and often differs from country to country. The types of fuel additives we offer include:

- gasoline performance additives, which clean and maintain key elements of the fuel delivery systems, including fuel injectors and intake valves, in gasoline engines;
- diesel fuel performance additives, which perform similar cleaning functions in diesel engines;
- cetane improvers, which increase the cetane number (ignition quality) in diesel fuel by reducing the delay between injection and ignition;
- stabilizers, which reduce or eliminate oxidation in fuel;
- corrosion inhibitors, which minimize the corrosive effects of combustion by-products and prevent rust;
- lubricity additives, which restore lubricating properties lost in the refining process;
- cold flow improvers, which improve the pumping and flow of distillate and diesel fuels in cold temperatures;
- octane enhancers, which increase octane ratings and decrease emissions; and
- static dissipating additives.

We offer a broad line of fuel additives worldwide and sell our products to major fuel marketers and refiners, as well as independent terminals and other fuel blenders.

Key drivers in the fuel additive marketplace include total vehicle miles driven, fuel economy, the introduction of new engine designs, regulations on emissions (both gasoline and diesel), quality of the crude oil slate and performance standards, and marketing programs of major oil companies.

Competition

We believe we are one of the four largest manufacturers and suppliers in the petroleum additives marketplace.

In the lubricant additives submarket of petroleum additives, our major competitors are The Lubrizol Corporation (a wholly-owned subsidiary of Berkshire Hathaway Inc.), Infineum (a joint venture between ExxonMobil Chemical and Royal Dutch Shell plc), and Chevron Oronite Company LLC. There are several other suppliers in the worldwide market who are competitors in their particular product areas.

The fuel additives submarket is characterized by more competitors. While we participate in many facets of the fuel additives market, our competitors tend to be more narrowly focused. In the gasoline detergent market, we compete mainly against BASF, Chevron Oronite Company LLC, and The Lubrizol Corporation. In the diesel and refinery markets, we compete mainly against The Lubrizol Corporation, Infineum, BASF, Clariant Ltd., Dorf Ketal, and Innospec Inc. We also compete against other regional companies in the fuel additives marketplace.

The competition among the participants in these industries is characterized by the need to provide customers with cost effective, technologically-capable products that meet or exceed industry specifications. The need to continually increase technology performance and lower cost through formulation technology and cost improvement programs is vital for success in this environment.

All Other—The “All other” category includes the operations of the antiknock compounds business (primarily sales of antiknock compounds in North America), as well as certain contracted manufacturing and services performed by Ethyl. The Ethyl facility is located in Houston, Texas and is substantially dedicated to terminal operations related to antiknock compounds and other fuel additives. The financial results of the petroleum additives activities by Ethyl are reflected in the petroleum additives segment results. The “All other” category financial results include a service fee charged by Ethyl for its production services to Afton.

Raw Materials and Product Supply

We use a variety of raw materials and chemicals in our manufacturing and blending processes and believe the sources of these are adequate for our current operations. The primary raw materials for Afton are base oil, polyisobutylene, antioxidants, alcohols, solvents, sulfonates, friction modifiers, olefins, and copolymers.

As the performance requirements of our products become more complex, we often work with highly specialized suppliers. In some cases, we source from a single supplier. In cases where we decide to source from a single supplier, we manage our risk by maintaining safety stock of the raw material or qualifying alternate suppliers. The backup position could take additional time to implement, but we are confident we can ensure continued supply for our customers. We continuously monitor our raw material supply situation and adjust our procurement strategies as conditions require.

Research, Development, and Testing

Research, development, and testing (R&D) provides Afton with new performance-based solutions for our customers in the petroleum additives market. We develop products through a combination of chemical synthesis, formulation development, engineering design, and performance testing. In addition to developing new products, R&D provides our customers and OEMs with data to substantiate product differentiation and technical support to assure total customer satisfaction.

We are committed to providing the most advanced products, comprehensive testing programs, and superior technical solutions tailored to the needs of our customers and OEMs worldwide. Afton continues to successfully implement techniques to drive efficiency in technology discovery and development, while expanding our internal testing, research, and customer support capabilities around the world in support of our goals of providing market-driven technical leadership and performance-based differentiation. In 2019, we completed construction to expand our Japan Technology Center which enhanced our technical infrastructure and testing capability in the region.

Afton continues to develop new products and technology to meet evolving OEM requirements (including specific demands of hybrid and electric vehicles), industry specifications and environmental regulations, and to keep our customers well-positioned for the future. A significant portion of our R&D investment is dedicated to the development of products that are differentiated by their ability to deliver improved fuel efficiency in addition to robust performance in a wide range of new vehicle and industrial equipment designs. Afton's state-of-the-art testing capabilities enable customized research in all areas of performance needed by both OEMs and tier one suppliers. Our leading-edge capabilities and fundamental understanding in the areas of combustion, friction control, energy efficiency, and wear prevention are used to set the stage for next-generation products in all areas.

In 2019, we successfully launched new technologies across all of our lubricant additive and fuel additive product areas. We developed new engine oil products for passenger cars and commercial trucks in support of our customers in all the major regions of the world in which we operate. We also launched technology that meets the latest North America passenger car motor oil specification, ILSAC GF-6, as well as products for the newest European commercial trucks.

We continued to develop new products in multiple application areas in the industrial additive sector, including hydraulic, industrial gear, turbine, slideway, and grease additives. Research is focused on the development of technologies that will provide differentiation to our customers in multiple performance areas including equipment life, reliability, and energy efficiency.

Research continued in our transmission fluid, axle oil, and tractor fluid product lines. This included the development of new OEM-specific additives used in factory-fill fluids installed during automotive component and vehicle assembly in the United States, Germany, Japan, India, and China as well as technology specifically designed for electric vehicles. In addition, we developed new products for the service-fill sector to provide our customers with the latest additive technology available, including some first-to-market capability enabling our customers to differentiate their offerings to the retail market.

We continue to provide leading technology in the fuel additives area. In 2019, we developed and launched new products in all product lines including gasoline performance additives and diesel performance additives, as well as additives used in the distribution of fuels. Many of these products use new technology specifically designed to perform well in new, modern engine designs and changing fuel properties, as well as addressing the growing need for increased fuel economy and emissions reduction. In addition, we continue to maintain close interactions with regulatory, industry, and OEM leaders to guide our development of future fuel additive technologies based on well-defined market needs.

Intellectual Property

Our intellectual property, including our patents, licenses, and trademarks, is an important component of our business. We actively protect our inventions, new technologies, and product developments by filing patent applications and maintaining trade secrets. We currently own approximately 1,400 issued or pending United States and foreign patents. In addition, we have acquired the rights under patents and inventions of others through licenses or otherwise. We take care to respect the intellectual property rights of others and we believe our products do not infringe upon those rights. We vigorously participate in patent opposition proceedings around the world, where necessary, to secure a technology base free of infringement. We believe our patent position is strong, aggressively managed, and sufficient for the conduct of our business.

We also have several hundred trademark registrations throughout the world for our marks, including NewMarket®, Afton Chemical®, Ethyl®, mmt®, HiTEC®, GREENBURN®, Passion for Solutions®, CleanStart®, Microbotz®, DriveMore® and Axcel®.

Commitment to Environmental and Safety Excellence

Our commitment to the environment and safety excellence applies to every employee, contractor, and visitor every day, at every site. Safety and environmental responsibility are a way of life at NewMarket - enhancing

operations, the way we work, and the relationships we maintain with our employees, customers, supply chain partners, and the communities in which we operate. Our objective is to establish a culture where our employees understand that good environmental and safety performance is good business and understand that environmental compliance and safety are their personal responsibilities. Every employee at NewMarket is responsible for ensuring that our high standards in the area of health, safety (including process safety), environmental protection, and security are upheld at all times.

Our Global Responsible Care Policy Statement includes a commitment to conduct operations in a manner that protects our employees, communities, and the environment, to comply with all applicable laws and regulations, and to reduce our environmental impacts. Additionally, in pursuit of our vision of zero incidents, we work with our employees and other key stakeholders to establish appropriate goals, objectives and targets.

Both Afton and Ethyl have implemented Responsible Care® Management Systems (RC14001®) at U.S. facilities. Our Responsible Care® management systems are certified by an independent third-party auditing process. Additionally, Afton's Feluy, Belgium; Suzhou, China; Hyderabad, India; Tsukuba, Japan; Rio de Janeiro, Brazil; Bracknell, England; and Singapore facilities are all certified to the environmental standard ISO 14001. Suzhou is also certified to OHSAS 18001, a global occupational health and safety standard. Afton's Sauget, Illinois plant continues to be an OSHA VPP (Voluntary Protection Program) "Star" worksite. In 2019, our recently acquired San Juan del Rio, Mexico site began the certification process.

In 2019, we continued to enhance our "Actively Caring" safety program, where people look out for the safety and welfare of others with courage and compassion, enabling the achievement of an injury-free environment. Both Afton and Ethyl were top performers among their industry peers with our worldwide injury/illness recordable rate (which is the number of injuries per 200,000 hours worked) in 2019 at .62, an improvement from a recordable rate of 1.05 in 2018. This safety performance improvement was related to integrating our Actively Caring culture at the San Juan del Rio site and continuing to promote safety as a core value of our company within the organization. Additionally, during 2019 we had zero serious injuries and no contractor recordable injuries. The safety performance improvement affirmed our Vision of Zero Improvement plans and actions across the sites, as well as the importance placed on our safety-first culture. We continue to leverage site-level Safety Improvement plans at key sites, and emphasize reporting "good catches" and "near misses" to help reduce risk and drive improved performance. We are committed to achieving our aspiration of zero injuries and incidents. To that end, six of our sites achieved the "Vision of Zero" with no injuries or incidents in 2019.

As members of the American Chemistry Council (ACC), Afton and Ethyl provide data on twelve metrics used to track environmental impact, safety, energy use, community outreach and emergency preparedness, greenhouse gas intensity, and product stewardship performance of the ACC member companies. These can be viewed at <http://responsiblecare.americanchemistry.com/Performance-Results>. The information on this website is not, and shall not be deemed to be, a part of this Annual Report on Form 10-K or incorporated by reference in this Annual Report on Form 10-K or any other filings we make with the Securities and Exchange Commission (SEC).

Environmental

In the United States and under similar foreign and state laws, we are subject to a variety of environmental laws and regulations, as well as environmental liabilities associated with the investigation and cleanup of hazardous substances. These liabilities may include personal injury, property damage, or natural resource damages arising from the release of, or exposure to, hazardous substances. They may be imposed on us in a range of situations without regard to violation of law or regulations. They may also be imposed jointly and severally, where one party may be held liable for a disproportionate share of the damages, up to and including the entire loss. These liabilities may include entities with any possible connection to the hazardous substances, including, for example, entities that formerly owned or operated a property or entities that arranged for disposal of hazardous substances from a property.

We believe we comply, in all material respects, with laws, regulations, statutes, and ordinances protecting the environment, including those related to the management and stewardship of chemicals. We have policies and procedures in place establishing regular reviews of our environmental compliance and stewardship, as well as monitoring any significant existing, potential, or threatened environmental issues that could materially affect the company.

Our total accruals for environmental remediation, dismantling, and decontamination were approximately \$11 million at December 31, 2019 and \$12 million December 31, 2018. As new technology becomes available, it may be possible to reduce accrued amounts. While we believe that we are currently fully accrued for known environmental issues, it is possible that unexpected future costs could have a significant financial impact on our financial position, results of operations, and cash flows.

The costs of complying with existing environmental, health, and safety laws and regulations as they pertain to our products and operations, including remediation, closure, and postclosure costs, are primarily included in cost of goods sold. We spent approximately \$29 million in 2019, \$30 million in 2018, and \$26 million in 2017 for ongoing environmental operating and clean-up costs, excluding depreciation of previously capitalized expenditures.

In addition to the ongoing environmental compliance costs and the costs to remediate contaminated sites, worldwide capital expenditures for pollution prevention and safety projects were \$8 million in 2019, \$10 million in 2018, and \$10 million in 2017. We expect expenditures will remain at a similar level for 2020.

The costs of complying with governmental pollution prevention and safety regulations are subject to:

- potential changes in applicable statutes and regulations (or their enforcement and interpretation);
- uncertainty as to the success of anticipated solutions to pollution problems;
- uncertainty as to whether additional expense may prove necessary; and
- potential for emerging technology to affect remediation methods and reduce associated costs.

Availability of Reports Filed with the Securities and Exchange Commission and Corporate Governance Documents

Our internet website address is www.newmarket.com. We make available, free of charge through our website, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act), as soon as reasonably practicable after such documents are electronically filed with, or furnished to, the SEC. In addition, our Corporate Governance Guidelines, Code of Conduct, and the charters of our Audit, Compensation, and Nominating and Corporate Governance Committees are available on our website and are available in print, without charge, to any shareholder upon request by contacting our Corporate Secretary at NewMarket Corporation, 330 South Fourth Street, Richmond, Virginia 23219. The information on our website is not, and shall not be deemed to be, a part of this Annual Report on Form 10-K or incorporated by reference in this Annual Report on Form 10-K or any other filings we make with the SEC. We file our annual, quarterly and current reports, proxy statements, and other information with the SEC. Our SEC filings are available to the public on the SEC's website at www.sec.gov.

Information about our Executive Officers

The names and ages of all executive officers as of February 18, 2020 follow.

<u>Name</u>	<u>Age</u>	<u>Positions</u>
Thomas E. Gottwald	59	Chairman of the Board, President, and Chief Executive Officer (Principal Executive Officer)
Brian D. Paliotti	43	Chief Financial Officer and Vice President (Principal Financial Officer)
Bruce R. Hazelgrove, III	59	Executive Vice President and Chief Administrative Officer
William J. Skrobacz	60	Controller (Principal Accounting Officer)
Cameron D. Warner, Jr.	61	Treasurer
M. Rudolph West	66	Vice President, General Counsel, and Secretary
Regina A. Harm	55	President, Afton Chemical Corporation

Our officers, at the discretion of the Board of Directors, hold office until the meeting of the Board of Directors following the next annual shareholders' meeting. Mr. Gottwald, Mr. Paliotti, Mr. Hazelgrove, Mr. Skrobacz, and Mr. Warner have served in their capacity for at least the last five years. Mr. West and Mrs. Harm have served in their capacities for less than five years.

Mr. West was named Vice President, General Counsel, and Secretary effective January 1, 2016. Prior to that date, Mr. West served as Assistant General Counsel and Secretary for more than five years. Mrs. Harm has been employed by Afton since 2007. Prior to being named President of Afton Chemical Corporation in May 2018, Mrs. Harm was Senior Vice President and Chief Operating Officer of Afton since October 2015, Vice President, Supply since July 2015, and Vice President, Performance Additives since November 2013.

ITEM 1A. RISK FACTORS

Our business is subject to many factors that could have a material adverse effect on our future performance, results of operations, financial condition, or cash flows and could cause our actual results to differ materially from those expressed or implied by forward-looking statements made in this Annual Report on Form 10-K. Those risk factors are outlined below.

- **Lack of availability of raw materials, including sourcing from some single suppliers, could negatively impact our ability to meet customer demand.**

The chemical industry can experience limited supply of certain materials. In addition, in some cases, we choose to source from a single supplier. Any significant disruption in supply, for any reason, could adversely affect our ability to obtain raw materials, which in turn could adversely affect our ability to ensure continued supply for our customers and to meet customer demand.

- **A disruption in the availability or capacity of distribution systems could negatively impact our ability to meet our customers' needs and affect our competitive position.**

We rely on a variety of modes of transportation to deliver products to our customers, including rail cars, cargo ships, and trucks. We depend upon the availability of a distribution infrastructure to deliver our products in a safe and timely manner. Any disruptions in this infrastructure network, whether caused by human error, accidents, deliberate acts of violence, limitations on capacity, repairs and improvements to infrastructure components, earthquakes, storms, or other natural disasters, could adversely affect our ability to meet customer demand.

- **A significant disruption or disaster at one of our production facilities, including those facilities which are sole producers of certain of our products, could result in our inability to meet production requirements and projected customer demand. This could potentially result in us incurring significant liabilities.**

We are dependent upon the continued safe operation of our production facilities. Several of the products we sell are produced only in one location. A prolonged disruption or disaster at one of our facilities could result in our inability to meet production requirements.

Our production facilities are subject to various hazards associated with the manufacturing, handling, storage, and transportation of chemical materials and products, including some that are reactive, explosive, and flammable. Such hazards could include leaks, ruptures, chemical spills, explosions, or fires which result in the discharge or release of toxic or hazardous substances or gases; mechanical failures; unscheduled downtime; and environmental hazards. These sites may also experience significant disruptions in operations due to inclement weather, natural disasters, flooding, and levee breaches. Many of these hazards could cause a disruption in the production of our products and may diminish our ability to meet output goals. We cannot assure that our facilities will not experience these types of hazards and disruptions in the future or that these incidents will not result in production delays and affect our ability to meet production requirements. Any such disruptions or disasters at our facilities could result in us losing revenue or not being able to maintain our relationships with our customers.

Additionally, some of the hazards mentioned above could result in significant liabilities related to personal injury and loss of life; severe damage to, or destruction of, property and equipment; and environmental contamination.

- **Our research and development efforts are costly and may not succeed, which could impair our ability to meet our customers' needs, affect our competitive position, and result in a loss of market share.**

The petroleum additives industry is subject to periodic technological change, changes in performance standards, and ongoing product improvements. Further, technological changes in some or all of our customers' products or processes may make our products obsolete. As a result, the life cycle of our products is often hard to predict. In order to maintain our profits and remain competitive, we must effectively respond to technological changes in our industry and successfully develop, manufacture, and market new or improved products in a cost-effective and timely manner. As a result, we must commit substantial resources each year to research and development to maintain and enhance our technological capabilities and meet our customers' changing needs. Ongoing investments in research and development for future products could result in higher costs without a proportional increase in profits. Additionally, for any new product program, there is a risk of technical or market failure in which case we may not be able to develop the new commercial products needed to maintain and enhance our competitive position, or we may need to commit additional resources to new product development programs. Moreover, new products may have lower margins than the products they replace.

- **Our failure to protect our intellectual property rights could harm our competitive position and could adversely affect our future performance and growth.**

Protection of our proprietary processes, methods, compounds, and other technologies is important to our business. We depend upon our ability to develop and protect our intellectual property rights to distinguish our products from those of our competitors. Failure to protect our existing intellectual property rights may result in the loss of valuable technologies or having to pay other companies for infringing on their intellectual property rights. The inability to continue using certain of our trademarks or service marks could result in the loss of brand recognition, and could require us to devote additional resources to advertise, rebrand our products, and market our brands. See Item 1, "Business-Intellectual Property."

We rely on a combination of patent, trade secret, trademark, and copyright laws, as well as judicial enforcement, to protect our intellectual property and technologies. We cannot assure that the measures taken by us to protect these assets and rights will provide meaningful protection or that adequate remedies will be available in the event of an unauthorized use or disclosure of our trade secrets or manufacturing expertise. We cannot assure that any of our intellectual property rights will not be challenged, invalidated, circumvented, or rendered unenforceable. In addition, we have manufacturing operations in countries where we may not have the same strength of intellectual property protection and enforcement as in North America or Europe resulting in a greater risk of a third party appropriating our intellectual property.

Furthermore, we cannot assure that any pending patent application filed by us will result in an issued patent, or if patents are issued to us, that those patents will provide meaningful protection against competitors or against competitive technologies. We could face patent infringement claims from our competitors or others alleging that our processes or products infringe on their proprietary technologies. If we were found to be infringing on the proprietary technology of others, we may be liable for damages, and we may be required to change our processes, redesign our products partially or completely, pay to use the technology of others, or stop using certain technologies or producing the infringing product entirely. Even if we ultimately prevail in an infringement suit, the existence of the suit could prompt customers to switch to products that are not the subject of infringement suits. We may not prevail in any intellectual property litigation and such litigation may result in significant legal costs or otherwise impede our ability to produce and distribute key products.

We also rely on unpatented proprietary manufacturing expertise, continuing technological innovation and other trade secrets to develop and maintain our competitive position. While we generally enter into confidentiality agreements with our employees and third parties to protect our intellectual property, we cannot assure that our confidentiality agreements will not be breached, that they will provide meaningful protection for our trade secrets and proprietary manufacturing expertise, or that adequate remedies will be available in the event of an unauthorized use or disclosure of our trade secrets or manufacturing expertise.

In addition, our trade secrets and know-how may be improperly obtained by other means, such as a breach of our information technology security systems or direct theft. Any unauthorized disclosure of our material know-how or trade secrets could adversely affect our business and results of operations.

- **Sudden or sharp changes in the prices of and/or demand for raw materials may adversely affect our profit margins.**

We utilize a variety of raw materials in the manufacture of our products, including base oil, polyisobutylene, antioxidants, alcohols, solvents, sulfonates, friction modifiers, olefins, and copolymers. We may also enter into contracts which commit us to purchase some of our more critical raw materials based on anticipated demand. Our profitability is sensitive to changes in the quantities of raw materials we may need and the costs of those materials which may be caused by changes in supply, demand or other market conditions, over which we have little or no control. Political and economic conditions globally have caused, and may continue to cause, our demand for and the cost of our raw materials to fluctuate. War, armed hostilities, terrorist acts, civil unrest, or other incidents may also cause a sudden or sharp change in our demand for and the cost of our raw materials. We cannot assure that we will be able to pass on to our customers any future increases in raw material costs in the form of price increases for our products. If our demand for raw materials were to decline such that we would not have need for the quantities required to be purchased under commitment agreements, we could incur additional charges that would affect our profitability.

- **Competitive pressures could adversely affect our margins and profitability.**

We face significant competition in all of the product lines and markets in which we compete. We expect that our competitors will develop and introduce new and enhanced products, which could cause

a decline in the market acceptance of certain products we manufacture. In addition, as a result of price competition, we may be compelled to reduce the prices for some of our products, which could adversely affect our margins and profitability. Some of our competitors may also have greater financial, technological, and other resources than we have and may be able to maintain greater operating and financial flexibility than we are able to maintain. As a result, these competitors may be able to better withstand changes in conditions within our industry, changes in the prices for raw materials, and changes in general economic conditions.

- **Our business could be adversely affected by current and future governmental regulation.**

We are subject to regulation by local, state, federal, and foreign governmental authorities. In some circumstances, before we may sell certain products, these authorities must approve these products, our manufacturing processes, and our facilities. We are also subject to ongoing reviews of our products, manufacturing processes, and facilities by governmental authorities. Any delay in obtaining or failure to obtain or maintain these approvals would adversely affect our ability to introduce new products and generate sales from those products.

New laws and regulations, including climate change regulations, may be introduced in the future and could result in additional compliance costs, which could prevent or inhibit the development, distribution, and sale of our products. If we fail to comply with applicable laws and regulations, we may be subject to civil remedies, including fines, injunctions, recalls, or seizures.

We are subject to the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and similar anti-bribery laws in other jurisdictions which generally prohibit companies and their intermediaries from making improper payments to foreign officials for the purpose of obtaining or retaining business. We are also subject to export and import laws and regulations which restrict trading with embargoed or sanctioned countries and certain individuals. Although we have policies and procedures designed to facilitate compliance with these laws and regulations, our employees, contractors and agents may take actions in violation of our policies. Any such violation, even if prohibited by our policies, could adversely affect our business and/or our reputation.

- **We rely on a small number of significant customers concentrated in the lubricant and fuel industries. The loss of sales to any of these customers could significantly reduce our revenues and negatively affect our profitability.**

Our principal customers are multinational oil companies primarily in the lubricant and fuel industries. These industries are characterized by the concentration of a few large participants. This concentration of customers affects our overall risk profile, since our customers will be similarly affected by changes in economic, geopolitical, and industry conditions. Many factors affect the level of our customers' spending on our products, including, among others, general business conditions, changes in technology, interest rates, gasoline prices, and consumer confidence in future economic conditions. A sudden or protracted downturn in these industries could adversely affect the buying power of, and purchases by, our customers. The loss of a significant customer or a material reduction in purchases by a significant customer could reduce our revenues and negatively affect our profitability.

- **In order to be successful, we must attract and retain a highly qualified workforce, including key employees in leadership positions.**

The success of our business is highly dependent on our ability to attract and retain highly qualified personnel to support our research and development efforts and our agility in effectively responding to technological changes in our industry. To the extent that the demand for skilled personnel exceeds supply, we could experience higher labor, recruiting, or training costs in order to attract and retain such a work force. We compete with other companies, both within and outside of our industry, for qualified technical and scientific personnel such as chemical and industrial engineers. To the extent that we lose experienced personnel through wage competition, normal attrition (including retirement), or other means, we must be able to attract qualified candidates to fill those positions and successfully manage

the transfer of critical knowledge from those individuals leaving our company. Our inability to maintain a highly qualified technical workforce could adversely affect our competitive position and result in a loss of market share.

We also must manage leadership development and succession planning throughout our business. To the extent that we are unable to attract, develop, and retain leadership talent successfully, we could experience business disruptions that adversely affect our ability to grow our business.

- **An information technology system failure may adversely affect our business.**

We rely on information technology systems, some of which are managed by third parties, to transact our business. An information technology system failure due to computer viruses, internal or external security breaches, cybersecurity attacks, power interruptions, hardware failures, fire, natural disasters, human error or other causes could disrupt our operations, lead to loss of confidential information (such as the personally identifiable information of individuals, including our employees) or intellectual property, and/or prevent us from being able to process transactions with our customers, operate our manufacturing facilities, and properly report transactions in a timely manner. Cybersecurity threats, in particular, continue to increase in sophistication. We have security processes and disaster recovery plans in place to mitigate these threats. Nonetheless, these may not be sufficient to identify a threat in a timely manner or protect our operations from such a threat, potentially resulting in financial, legal, business, or reputational damage to our company.

A significant, protracted information technology system failure may adversely affect our results of operations, financial condition, or cash flows.

Furthermore, we are subject both to changing cybersecurity rules and evolving data privacy rules and regulations, such as the European Union's General Data Protection Regulation, in countries, states, and jurisdictions where we conduct business. The failure to comply with these rules and regulations could result in significant financial penalties or increase our cost of doing business.

- **The occurrence or threat of extraordinary events, including domestic or international terrorist attacks, hostilities, or health-related epidemics, may disrupt our operations, decrease demand for our products, and increase our expenses.**

Chemical-related assets may be at greater risk of future terrorist attacks than other possible targets in the United States and throughout the world. Federal legislation has imposed significant site security requirements, specifically on chemical manufacturing facilities. Federal regulations have also been enacted to increase the security of the transportation of hazardous chemicals in the United States. The enactment of further federal regulations to increase the security of the transportation of hazardous chemicals in the United States could result in additional costs.

The occurrence of extraordinary events, including future terrorist attacks, the outbreak or escalation of hostilities, or a health-related epidemic cannot be predicted, but their occurrence can be expected to negatively affect the economy in general, as well as the markets for our products, and can result in production downtime. In addition, the damage from a direct attack on our assets or assets used by us could include loss of life or property damage, and available insurance coverage may not be sufficient to cover all of the damage incurred or, if available, may be prohibitively expensive.

- **We face risks related to our foreign operations that may negatively affect our business.**

In 2019, sales to customers outside of the United States accounted for over 65% of consolidated net sales. We do business in all major regions of the world, some of which do not have stable economies or governments. In particular, we sell and market products in countries experiencing political and/or economic instability in the Middle East, Asia Pacific, Latin America, and Europe. Our international operations are subject to international business risks, including unsettled political conditions, expropriation, import and export restrictions, trade policies, increases in royalties, exchange controls, national and regional labor strikes, taxes, government royalties, inflationary or unstable economies,

currency exchange rate fluctuations, and changes in laws and policies governing operations of foreign-based companies (such as restrictions on repatriation of earnings or proceeds from liquidated assets of foreign subsidiaries). The occurrence of any one or a combination of these factors may increase our costs or have other adverse effects on our business.

The United Kingdom's June 2016 referendum decision to withdraw from the European Union (EU), commonly known as Brexit, has resulted in uncertainty for our European operations regarding the extent to which our operations and financial performance will be affected immediately and in the longer term. Our key manufacturing facilities in the current EU are not in the United Kingdom (U.K.). Therefore, goods movements will continue to be predominantly within the EU post-Brexit which means that existing key trade agreements will continue to apply. The U.K. withdrew from the EU effective January 31, 2020 entering into a transition period which currently extends until December 31, 2020. During the transition, the U.K. will remain in the customs union and the free market, and there will be minimal impact. The main focus of the U.K. and EU during this period will be negotiating the terms of the future trading relationship. However, there continues to be significant uncertainty related to Brexit and its impact since a number of regulatory and logistical challenges remain, especially if the future trading relationship cannot be agreed upon during the transition period. We are continuing to monitor and evaluate changes in legislation and trading practices in order to mitigate any potential risks to our operations associated with the changing commercial landscape.

- **A substantial amount of indebtedness could adversely impact our business and limit our operational and financial flexibility.**

We have incurred, and may in the future incur, significant amounts of indebtedness to support our operations. Our indebtedness could, among other things, require us to dedicate a substantial portion of our cash flow to repaying our indebtedness, thus reducing the amount of funds available for other general corporate purposes; limit our ability to borrow additional funds necessary for working capital, capital expenditures or other general corporate purposes; and limit our flexibility in planning for, or reacting to, changes in our business.

Our ability to make payments on or refinance our indebtedness will depend on our ability to generate cash from operations in the future. This, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory, and other factors that are beyond our control.

We cannot guarantee that our business will generate sufficient cash flow from operations or that future borrowings will be available to us under our credit facilities in an amount sufficient to enable us to repay our debt, service our indebtedness, or to fund other liquidity needs. Furthermore, substantially all of our business is conducted through our subsidiaries, and we cannot guarantee that our subsidiaries will be able to distribute funds to us for these purposes.

We may need to refinance all or a portion of our indebtedness on or before maturity. We cannot guarantee that we will be able to refinance any of our indebtedness on commercially reasonable terms or at all.

Additionally, our debt instruments contain restrictive covenants. These covenants may constrain our activities and limit our operational and financial flexibility. The failure to comply with these covenants could result in an event of default.

Our revolving credit facility utilizes the London Interbank Offered Rates (LIBOR) in establishing interest rates on the facility. LIBOR is the subject of recent proposals for reform, which may cause LIBOR to disappear entirely or perform differently than in the past. The consequences of these developments cannot be entirely predicted at this time, but could result in an increase in the cost of borrowings under the revolving credit facility.

- **We are exposed to fluctuations in foreign exchange rates, which may adversely affect our results of operations.**

We conduct our business in the local currency of many of the countries in which we operate. The financial condition and results of operations of our foreign operating subsidiaries are reported in the relevant local currency and then translated to U.S. Dollars at the applicable currency exchange rate for inclusion in our consolidated financial statements. Changes in exchange rates between these foreign currencies and the U.S. Dollar will affect the recorded amounts of our assets and liabilities, as well as our revenues, costs, and operating margins. The primary foreign currencies in which we have exchange rate fluctuation exposure are the European Union Euro, British Pound Sterling, Japanese Yen, Chinese Renminbi, Indian Rupee, Singapore Dollar, Mexican Peso, Australian Dollar, and Canadian Dollar. Exchange rates between these currencies and the U.S. Dollar have fluctuated significantly in recent years and may do so in the future.

- **Legal proceedings and other claims could impose substantial costs on us.**

We are involved in numerous administrative and legal proceedings that result from, and are incidental to, the conduct of our business. From time to time, these proceedings involve environmental, product liability, tetraethyl lead, premises asbestos liability, and other matters. See Item 3, “Legal Proceedings.” There is no assurance that our available insurance will cover these claims, that our insurers will not challenge coverage for certain claims, or that final damage awards will not exceed our available insurance coverage.

At any given time, we are involved in claims, litigation, administrative proceedings, and investigations of various types in a number of jurisdictions involving potential environmental liabilities, including clean-up costs associated with waste disposal sites, natural resource damages, property damage, and personal injury. We cannot assure that the resolution of these environmental matters will not have an adverse effect on our results of operations, financial condition, or cash flows.

- **Environmental matters could have a substantial negative impact on our business.**

As a manufacturer and distributor of chemical products, we are generally subject to extensive local, state, federal, and foreign environmental, safety, and health laws and regulations concerning, among other things, emissions to the air; discharges to land and water; the generation, handling, treatment, and disposal of hazardous waste and other materials; and remediation of contaminated soil, as well as surface and ground water. Our operations entail the risk of violations of those laws and regulations, many of which provide for substantial fines and criminal sanctions for violations. We believe that we comply in all material respects with laws, regulations, statutes, and ordinances protecting the environment, including those related to the discharge of materials. However, we cannot assure that we have been or will be at all times in compliance with all of these requirements.

In addition, these requirements, and the enforcement or interpretation of these requirements, may become more stringent in the future. Although we cannot predict the ultimate cost of compliance with any such requirements, the costs could be material. Noncompliance could subject us to material liabilities, such as government fines, damages arising from third-party lawsuits, or the suspension and potential cessation of non-compliant operations. We may also be required to make significant site or operational modifications at substantial cost. Future developments could also restrict or eliminate the use of or require us to make modifications to our products.

There may be environmental problems associated with our properties of which we are unaware. The discovery of environmental liabilities attached to our properties could have an adverse effect on our business even if we did not create or cause the problem.

We may also face liability arising from current or future claims alleging personal injury, product liability, or property damage due to exposure to chemicals or other hazardous substances, such as premises asbestos, at or from our facilities. We may also face liability for personal injury, product

liability, property damage, natural resource damage, or clean-up costs for the alleged migration of contaminants or hazardous substances from our facilities or for future accidents or spills.

In some cases, we have been identified, and in the future may be identified, as a potentially responsible party (PRP) in connection with state and federal laws regarding environmental clean-up projects. As a PRP, we may be liable for a share of the costs associated with cleaning up hazardous waste sites, such as a landfill to which we may have sent waste.

The ultimate costs and timing of environmental liabilities are difficult to predict. Liability under environmental laws relating to contaminated sites can be imposed retroactively and on a joint and several basis. A liable party could be held responsible for all costs at a site, whether currently or formerly owned or operated, regardless of fault, knowledge, timing of the contamination, cause of the contamination, percentage of contribution to the contamination, or the legality of the original disposal. We could incur significant costs, including clean-up costs, natural resource damages, civil or criminal fines and sanctions, and third-party claims, as a result of past or future violations of, or liabilities under, environmental laws.

- **The insurance we maintain may not fully cover all potential exposures.**

We maintain property, business interruption, and casualty insurance, but such insurance may not cover all risks associated with the hazards of our business and is subject to limitations, including deductibles and maximum liabilities covered. We may incur losses beyond the limits, or outside the coverage, of our insurance policies, including liabilities for environmental remediation. In the future, we may not be able to obtain coverage at current levels, and our premiums may increase significantly on coverage that we maintain.

- **We may be unable to consummate a proposed acquisition transaction due to a lack of regulatory approval or the failure of one or more parties to satisfy conditions to close. In addition, we may not be able to realize the expected benefits from recent or future acquisitions or from investments in our infrastructure, or it may take longer to realize those benefits than originally planned. The inability to achieve our objectives related to these activities could result in unanticipated expenses and losses.**

As part of our business growth strategy, we intend to continue pursuing acquisitions and investing in our infrastructure. Our ability to implement these components of our growth strategy will be limited by our ability to identify appropriate acquisition or joint venture candidates; our ability to consummate proposed transactions due to a lack of regulatory approval or the failure of one of the parties to a transaction to satisfy conditions required for closing; and the availability of financial resources, including cash and borrowing capacity. When we acquire new businesses or invest in infrastructure improvements (for example, building new plant facilities), we consider the benefits we expect to realize and time frames over which we will realize those benefits. The expenses incurred in completing these types of activities, the time it takes to integrate the activities into our ongoing business, or our failure to realize the expected benefits from the activities in the planned time frames could result in unanticipated expenses and losses. The process of integrating acquired operations into our existing operations may result in unforeseen operating difficulties and may require significant financial resources that would otherwise be available for the ongoing development or expansion of existing operations.

- **We could be required to make additional contributions to our pension plans, which may be underfunded due to any underperformance of equity markets.**

Our pension plan asset allocation is predominantly weighted towards equities. Cash contribution requirements to our pension plans are sensitive to changes in our plans' actual return on assets. Reductions in our plans' return on assets due to poor performance of equity markets could cause our pension plans to be underfunded and require us to make additional cash contributions.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal operating properties are shown below. Unless indicated, we own the research, development, and testing facilities, as well as the manufacturing and distribution properties, which primarily support the petroleum additives business segment.

Research, Development, and Testing	Richmond, Virginia Bracknell, England Tsukuba, Japan Ashland, Virginia Suzhou, China
Manufacturing and Distribution	Feluy, Belgium (<i>lubricant additives</i>) Houston, Texas (<i>lubricant and fuel additives; also storage and distribution</i>) Hyderabad, India (<i>lubricant additives</i>) Jurong Island, Singapore (<i>lubricant additives; leased land</i>) Orangeburg, South Carolina (<i>fuel additives; manufacturing equipment only</i>) Port Arthur, Texas (<i>lubricant additives</i>) Rio de Janeiro, Brazil (<i>petroleum additives storage and distribution; manufacturing equipment only</i>) San Juan del Rio, Mexico (<i>lubricant additives</i>) Sauget, Illinois (<i>lubricant and fuel additives</i>) Suzhou, China (<i>lubricant additives</i>)

We own our corporate headquarters located in Richmond, Virginia, and generally lease our regional and sales offices located in a number of areas worldwide.

NewMarket Development manages the property we own in Richmond, Virginia consisting of approximately 57 acres. Our corporate offices are included in this acreage, as well as a research and testing facility and several acres dedicated to other uses. We are currently exploring various development opportunities for portions of the property as the demand warrants. This effort is ongoing in nature, and we have no specific timeline for any future developments.

Production Capacity

We believe our plants and supply agreements are sufficient to meet expected sales levels. Operating rates of the plants vary with product mix and normal sales swings. We believe that our facilities are well maintained and in good operating condition.

ITEM 3. LEGAL PROCEEDINGS

We are involved in legal proceedings that are incidental to our business and may include administrative or judicial actions. Some of these legal proceedings involve governmental authorities and relate to environmental matters. For further information, see Environmental in Item 1 of this Form 10-K.

While it is not possible to predict or determine with certainty the outcome of any legal proceeding, we believe the outcome of any of these proceedings, or all of them combined, will not result in a material adverse effect on our consolidated results of operations, financial condition, or cash flows.

In April 2018, the United States Environmental Protection Agency (USEPA) notified Afton concerning alleged violations of the Clean Air Act regarding the Afton Sauget, Illinois facility's National Emission Standards for Hazardous Air Pollutants (NESHAP) and the Hazardous Organic NESHAP compliance programs. Without admitting any fact, responsibility, fault, or liability, Afton and the USEPA agreed on a settlement of these purported liabilities, including a penalty of \$0.3 million under a negotiated Administrative Consent Order. Afton and the USEPA are still negotiating the Consent Agreement and Final Order, including how much of the penalty may be resolved through one or more proposed supplemental environmental projects.

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

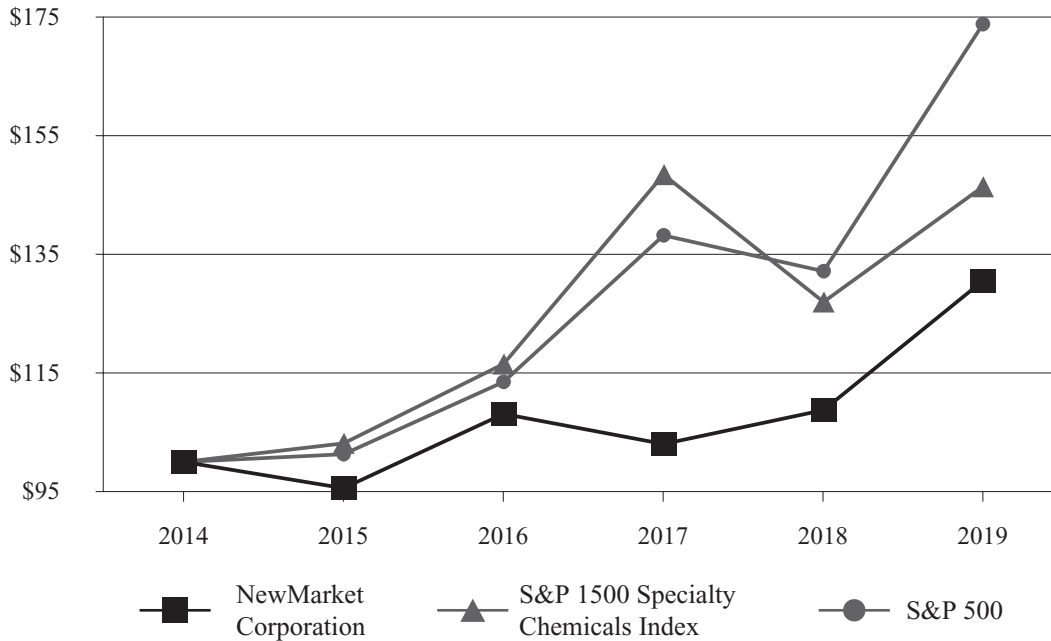
Our common stock, with no par value, has traded on the New York Stock Exchange (NYSE) under the symbol "NEU" since June 21, 2004 when we became the parent holding company of Ethyl, Afton, NewMarket Services, NewMarket Development, and their subsidiaries. We had 2,024 shareholders of record at January 31, 2020.

On December 13, 2018, our Board of Directors approved a share repurchase program authorizing management to repurchase up to \$500 million of NewMarket's outstanding common stock effective January 1, 2019 until December 31, 2021, as market conditions warrant and covenants under our existing debt agreements permit. We may conduct the share repurchase in the open market, in privately negotiated transactions, through block trades or pursuant to any trading plan that may be adopted in accordance with Rule 10b5-1 of the Securities Exchange Act of 1934. The repurchase program does not require NewMarket to acquire any specific number of shares and may be terminated or suspended at any time. At December 31, 2019, \$500 million remained available under the 2018 authorization. There were no purchases during the fourth quarter of 2019 under this authorization.

Cash dividends declared and paid totaled \$7.30 per share for the year ended December 31, 2019 and \$7.00 per share for the year ended December 31, 2018. The declaration and payment of dividends is subject to the discretion of our Board of Directors. Future dividends will depend on various factors, including our financial condition, earnings, cash requirements, legal requirements, restrictions in agreements governing our outstanding indebtedness, and other factors deemed relevant by our Board of Directors.

The performance graph showing the five-year cumulative total return on our common stock as compared to chemical companies in the S&P 1500 Specialty Chemicals Index and the S&P 500 is shown below. The graph assumes \$100 invested on the last day of December 2014, and the reinvestment of all dividends. The graph is based on historical data, and is not intended to be a forecast or indication of future performance of our common stock.

**Performance Graph
Comparison of Five-Year Cumulative Total Return
Performance Through December 31, 2019**



	December 31,					
	2014	2015	2016	2017	2018	2019
NewMarket Corporation	\$100.00	\$ 95.66	\$108.19	\$103.12	\$108.81	\$130.59
S&P 1500 Specialty Chemicals Index	100.00	103.19	116.60	148.53	127.09	146.45
S&P 500	100.00	101.38	113.51	138.29	132.23	173.86

The graph and table above are not deemed “filed” with the SEC for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section, nor are they incorporated by reference into other filings made by us with the SEC.

ITEM 6. SELECTED FINANCIAL DATA

**NewMarket Corporation and Subsidiaries
Five Year Summary**

<i>(in thousands, except per-share amounts and percentages)</i>	Years Ended December 31,				
	2019	2018	2017	2016	2015
Results of operations					
Net sales	\$2,190,295	\$2,289,675	\$2,198,404	\$2,049,451	\$2,140,830
Costs and expenses	1,852,974	1,997,001	1,875,670	1,694,692	1,786,050
Operating profit	337,321	292,674	322,734	354,759	354,780
Interest and financing expenses, net	29,241	26,723	21,856	16,785	14,652
Other income (expense), net (1)	23,510	24,334	14,564	5,234	(1,157)
Income before income tax expense	331,590	290,285	315,442	343,208	338,971
Income tax expense (2)	77,304	55,551	124,933	99,767	100,368
Net income	<u>\$ 254,286</u>	<u>\$ 234,734</u>	<u>\$ 190,509</u>	<u>\$ 243,441</u>	<u>\$ 238,603</u>
Financial position and other data					
Total assets	\$1,885,132	\$1,697,274	\$1,712,154	\$1,416,436	\$1,286,249
Operations:					
Working capital	\$ 570,503	\$ 542,119	\$ 516,861	\$ 542,293	\$ 504,712
Current ratio	2.85 to 1	3.00 to 1	2.63 to 1	2.84 to 1	2.91 to 1
Depreciation and amortization	\$ 87,560	\$ 71,759	\$ 55,340	\$ 44,893	\$ 42,265
Capital expenditures	\$ 59,434	\$ 74,638	\$ 148,713	\$ 142,874	\$ 126,499
Gross profit as a % of net sales	28.8%	25.6%	28.9%	33.0%	31.6%
Research, development, and testing expenses	\$ 144,465	\$ 140,289	\$ 146,002	\$ 160,788	\$ 159,868
Total long-term debt	\$ 642,941	\$ 770,999	\$ 602,900	\$ 507,275	\$ 490,920
Common stock and other shareholders' equity	\$ 683,098	\$ 489,907	\$ 601,649	\$ 483,251	\$ 387,564
Total long-term debt as a % of total capitalization (debt plus equity)	48.5%	61.1%	50.1%	51.2%	55.9%
Common stock					
Basic and diluted earnings per share	\$ 22.73	\$ 20.34	\$ 16.08	\$ 20.54	\$ 19.45
Equity per share	\$ 61.05	\$ 43.80	\$ 51.07	\$ 40.79	\$ 32.44
Cash dividends declared per share	\$ 7.30	\$ 7.00	\$ 7.00	\$ 6.40	\$ 5.80

Notes to the Five Year Summary

- (1) Other income (expense), net for each year included the components of net periodic benefit cost (income), except for service costs, amounting to income of \$23 million in 2019, \$19 million in 2018, \$14 million in 2017, \$8 million in 2016 and \$2 million in 2015. In addition, 2015 and 2016 included a loss on the Goldman Sachs interest rate swap, as well as several other small items. The loss on the interest rate swap was \$5 million for 2016 and \$3 million for 2015. We terminated the interest rate swap on September 7, 2016. We did not use hedge accounting to record the interest rate swap, and accordingly, any change in the fair value was immediately recognized in earnings.
- (2) On December 22, 2017, the United States enacted tax legislation commonly known as the Tax Cuts and Jobs Act, which required a one-time tax in 2017 on the deemed repatriation of previously deferred foreign earnings and reduced the U.S. corporate tax rate from 35% to 21% beginning in 2018. We recorded a net tax expense of \$31 million in 2017 as a result.

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

Forward-Looking Statements

The following discussion, as well as other discussions in this Annual Report on Form 10-K, contains forward-looking statements about future events and expectations within the meaning of the Private Securities Litigation Reform Act of 1995. We have based these forward-looking statements on our current expectations and projections about future results. When we use words in this document such as “anticipates,” “intends,” “plans,” “believes,” “estimates,” “projects,” “expects,” “should,” “could,” “may,” “will,” and similar expressions, we do so to identify forward-looking statements. Examples of forward-looking statements include, but are not limited to, statements we make regarding future prospects of growth in the petroleum additives market, other trends in the petroleum additives market, our ability to maintain or increase our market share, and our future capital expenditure levels.

We believe our forward-looking statements are based on reasonable expectations and assumptions, within the bounds of what we know about our business and operations. However, we offer no assurance that actual results will not differ materially from our expectations due to uncertainties and factors that are difficult to predict and beyond our control.

Factors that could cause actual results to differ materially from expectations include, but are not limited to, the availability of raw materials and distribution systems; disruptions at production facilities, including single-sourced facilities; hazards common to chemical businesses; the ability to respond effectively to technological changes in our industry; failure to protect our intellectual property rights; sudden or sharp raw material price increases; competition from other manufacturers; current and future governmental regulations; the gain or loss of significant customers; failure to attract and retain a highly-qualified workforce; an information technology system failure or security breach; the occurrence or threat of extraordinary events, including natural disasters, terrorist attacks, and health-related epidemics; risks related to operating outside of the United States; political, economic, and regulatory factors concerning our products; the impact of substantial indebtedness on our operational and financial flexibility; the impact of fluctuations in foreign exchange rates; resolution of environmental liabilities or legal proceedings; limitation of our insurance coverage; our inability to realize expected benefits from investment in our infrastructure or from recent or future acquisitions, or our inability to successfully integrate recent or future acquisitions into our business; and the underperformance of our pension assets resulting in additional cash contributions to our pension plans. Risk factors are discussed in Item 1A. “Risk Factors.”

You should keep in mind that any forward-looking statement made by us in this discussion or elsewhere speaks only as of the date on which we make it. New risks and uncertainties arise from time to time, and it is impossible for us to predict these events or how they may affect us. We have no duty to, and do not intend to, update or revise the forward-looking statements in this discussion after the date hereof, except as may be required by law. In light of these risks and uncertainties, any forward-looking statement made in this discussion or elsewhere, might not occur.

OVERVIEW

When comparing the results of the petroleum additives segment for 2019 with 2018, net sales decreased 4.6% primarily due to lower product shipments and an unfavorable foreign currency impact, which was partially offset by higher selling prices. Petroleum additives operating profit for 2019 was 15.5% higher than 2018 primarily reflecting lower raw material costs and improved selling prices, partially offset by the impact from lower product shipments.

Our operations generate cash that is in excess of the needs of the business. We continue to invest and manage our business for the long-term with the goal of helping our customers succeed in their marketplaces. Our investments

continue to be in organizational talent, technology development and processes, and global infrastructure, consisting of technical centers, production capability, and geographic expansion.

RESULTS OF OPERATIONS

Management's discussion and analysis of our results of operations is presented below for the comparative periods of 2019 versus 2018. The discussion and analysis of our results of operations for 2018 compared to 2017 is available in Item 7 of our 2018 Annual Report on Form 10-K.

Net Sales

Our consolidated net sales for 2019 amounted to \$2.2 billion, a decrease of \$99 million, or 4.3% from 2018.

No single customer accounted for 10% or more of our total net sales in 2019, 2018, or 2017.

The following table shows net sales by segment and product line for each of the last three years.

<i>(in millions)</i>	Years Ended December 31,		
	2019	2018	2017
Petroleum additives			
Lubricant additives	\$1,779	\$1,871	\$1,790
Fuel additives	397	410	397
Total	2,176	2,281	2,187
All other	14	9	11
Net sales	<u>\$2,190</u>	<u>\$2,290</u>	<u>\$2,198</u>

Petroleum Additives - The regions in which we operate include North America (the United States and Canada), Latin America (Mexico, Central America, and South America), Asia Pacific, and the Europe/Middle East/Africa/India (EMEAI) region. The percentage of net sales being generated in the regions has remained fairly consistent over the past three years, with some limited fluctuation due to various factors, including the impact of regional economic trends. North America and EMEAI both represent around 35% of our petroleum additives net sales, while Asia Pacific contributes about 25% and Latin America represents the remaining amount. As shown in the table above, lubricant additives net sales and fuel additives net sales compared to total petroleum additives net sales has remained substantially consistent over the past three years.

The approximate components of the petroleum additives decrease in net sales of \$105 million when comparing 2019 to 2018 are shown below in millions.

Net sales for year ended December 31, 2018	\$2,281
Lubricant additives shipments	(114)
Fuel additives shipments	(24)
Selling prices	60
Foreign currency impact, net	(27)
Net sales for year ended December 31, 2019	<u>\$2,176</u>

Petroleum additives net sales for 2019 of \$2.2 billion were approximately 4.6% lower than 2018 levels. The decrease was across all regions except North America, with decreases ranging from about 7% to 12% in the other three regions. The North America region increased slightly when comparing the two years. Petroleum additives shipments accounted for a \$138 million decrease in net sales between 2018 and 2019. Improved selling prices, net of an unfavorable foreign currency impact, resulted in an increase in net sales of \$33 million when comparing

the two years, partially offsetting the impact from lower product shipments. The United States Dollar strengthened against most of the major currencies in which we transact, resulting in an unfavorable impact to net sales in 2019. The unfavorable impact was predominantly from the Euro.

On a worldwide basis, the volume of product shipments for petroleum additives decreased 5.5% when comparing 2019 with 2018. Shipments of lubricant additives decreased in the EMEAI, Asia Pacific, and Latin America regions, with a small increase in the North America region. Fuel additives shipments decreased across all regions except for the Asia Pacific region, which recorded an increase in fuel additives shipments.

All Other - The “All other” category includes the operations of the antiknock compounds business, and certain contracted manufacturing and services performed by Ethyl.

Segment Operating Profit

NewMarket evaluates the performance of the petroleum additives business based on segment operating profit. NewMarket Services expenses are charged to each subsidiary pursuant to services agreements between the companies. Depreciation on segment property, plant, and equipment, as well as amortization of segment intangible assets and lease right-of-use assets, is included in segment operating profit.

The table below reports segment operating profit for the last three years. A reconciliation of segment operating profit to income before income tax expense is in Note 4.

<i>(in millions)</i>	Years Ended December 31,		
	2019	2018	2017
Petroleum additives	<u>\$359</u>	<u>\$311</u>	<u>\$345</u>
All other	<u>\$ (2)</u>	<u>\$ (3)</u>	<u>\$ 4</u>

Petroleum Additives - Petroleum additives segment operating profit increased \$48 million when comparing 2019 to 2018. Both periods included the impact of the same factors that affected gross profit (see discussion below).

The operating profit margin was 16.5% in 2019 and 13.6% in 2018. In 2019, we began to see a turnaround in the operating performance of petroleum additives as compared to 2018. In the two years prior to 2019, our operations experienced a challenging economic environment caused mainly by increases in raw material costs. While we have seen evidence that this trend improved in 2019, we continue to make operating margin stability a priority. While operating profit margins will fluctuate from quarter to quarter due to multiple factors, we believe the fundamentals of our business and industry are unchanged.

Petroleum additives gross profit increased \$47 million when comparing 2019 and 2018. Cost of goods sold as a percentage of net sales was 71.1% in 2019 and 74.5% in 2018.

When comparing 2019 and 2018, the increase in gross profit resulted from an improvement in selling prices, as well as favorable raw material and conversion costs (including a favorable foreign currency translation impact), which together contributed over 100% of the change between the two years. These favorable factors were partially offset by an unfavorable impact from product shipments, as discussed in the Net Sales section above. The sales price variance for both years included the impact from foreign currency rates as discussed in the Net Sales section above.

Petroleum additives selling, general, and administrative expenses (SG&A) were \$5 million, or 4.1% lower in 2019 than 2018. SG&A as a percentage of net sales was 5.8% in 2019 and 5.7% in 2018. Our SG&A costs are mainly personnel-related and include salaries, benefits and other costs associated with our workforce. There were no significant changes in the individual components of SG&A costs when comparing the years.

Our investment in petroleum additives research, development, and testing (R&D) increased approximately \$4 million when comparing 2019 with 2018. As a percentage of net sales, R&D was 6.6% in 2019 and 6.2% in 2018. Our R&D investments reflect our efforts to support the development of solutions that meet our customers' needs, meet new and evolving standards, and support our expansion into new product areas. Our approach to R&D investment, as it is with SG&A, is one of purposeful spending on programs to support our current product base and to ensure that we develop products to support our customers' programs in the future. R&D investments include personnel-related costs, as well as costs for internal and external testing of our products. Most R&D is incurred in the United States and the U.K., with approximately 70% of total R&D being attributable to the North America and EMEAI regions. Substantially all investments in new product development are incurred in the United States and the U.K. The remaining R&D is attributable to the Asia Pacific and Latin America regions and represents customer technology support services in those regions. All of our R&D is related to the petroleum additives segment.

The following discussion references certain captions on the Consolidated Statements of Income.

Interest and Financing Expenses

Interest and financing expenses were \$29 million in 2019 and \$27 million in 2018. The increase in interest and financing expense between 2019 and 2018 resulted primarily from lower capitalized interest, which was partially offset by lower average debt.

Other Income (Expense), Net

Other income (expense), net was income of \$24 million in both 2019 and 2018. The amounts for both periods primarily reflect the components of net periodic benefit cost (income), except for service costs. See Note 17 for further information on total periodic benefit cost (income).

Income Tax Expense

Income tax expense was \$77 million in 2019 and \$56 million in 2018. The effective tax rate was 23.3% in 2019 and 19.1% in 2018. When comparing 2019 and 2018, income tax increased \$13 million due to the higher effective tax rate and \$8 million due to higher income before income tax expense. The change in the effective tax rates is primarily due to one-time benefits recorded in 2018 associated with the Tax Cuts and Jobs Act (Tax Reform Act). See Note 18 for further details on income taxes.

CASH FLOWS DISCUSSION

We generated cash from operating activities of \$337 million in 2019 and \$198 million in 2018.

During 2019, we used the \$337 million cash generated from operations to repay \$123 million on our revolving credit facility, pay \$82 million of dividends on our common stock, and fund capital expenditures of \$59 million. Cash flows from operating activities included an increase of \$5 million from lower working capital requirements, as well as cash contributions of \$10 million to our pension and postretirement plans.

During 2018, we used the \$198 million cash generated from operations, \$168 million of borrowings on our revolving credit facility and \$11 million cash on hand to repurchase \$232 million of our common stock, pay dividends of \$80 million on our common stock, and fund capital expenditures of \$75 million. Cash flows from operating activities included a decrease of \$54 million from higher working capital requirements, as well as cash contributions of \$65 million to our pension and postretirement plans.

We expect that cash from operations, together with borrowing available under our credit facilities, will continue to be sufficient for our operating needs and planned capital expenditures for at least the next twelve months.

FINANCIAL POSITION AND LIQUIDITY

Cash

At December 31, 2019, we had cash and cash equivalents of \$144 million as compared to \$73 million at the end of 2018.

Our cash and cash equivalents held by our foreign subsidiaries amounted to approximately \$99 million at December 31, 2019 and \$71 million at December 31, 2018. Periodically, we repatriate cash from our foreign subsidiaries to the United States through intercompany dividends and loans. Under the Tax Reform Act enacted in 2017, previously deferred foreign earnings were subjected to U.S. tax in 2017. The Tax Reform Act also includes a 100% dividends received deduction for most future distributions from our foreign subsidiaries. As a result of these two provisions, we do not anticipate significant tax consequences of future distributions of foreign earnings.

A portion of our foreign cash balances is associated with earnings that we have asserted are indefinitely reinvested. We plan to use these indefinitely reinvested earnings to support growth outside of the United States through funding of operating expenses, research and development expenses, capital expenditures, and other cash needs of our foreign subsidiaries.

Debt

4.10% Senior Notes - At both December 31, 2019 and December 31, 2018, we had \$350 million of 4.10% senior notes due 2022 which are senior unsecured obligations. The senior notes are registered under the Securities Act of 1933. We incurred financing costs totaling approximately \$5 million related to the 4.10% senior notes, which are being amortized over the term of the agreement.

The 4.10% senior notes rank:

- equal in right of payment with all of our existing and future senior unsecured indebtedness; and
- senior in right of payment to any of our future subordinated indebtedness.

The indenture governing the 4.10% senior notes contains covenants that, among other things, limit our ability and the ability of our subsidiaries to:

- create or permit to exist liens;
- enter into sale-leaseback transactions;
- incur additional guarantees; and
- sell all or substantially all of our assets or consolidate or merge with or into other companies.

We were in compliance with all covenants under the indenture governing the 4.10% senior notes as of December 31, 2019 and December 31, 2018.

3.78% Senior Notes - On January 4, 2017, we issued \$250 million in senior unsecured notes in a private placement with The Prudential Insurance Company of America and certain other purchasers. These notes bear interest at 3.78% and mature on January 4, 2029. Interest is payable semiannually. Principal payments of \$50 million are payable annually beginning on January 4, 2025. We have the right to make optional prepayments on the notes at any time, subject to certain limitations. The note purchase agreement contains representations, warranties, terms and conditions customary for transactions of this type. These include negative covenants, certain financial covenants, and events of default which are substantially similar to the covenants and events of default in our revolving credit facility.

We were in compliance with all covenants under the 3.78% senior notes as of December 31, 2019 and December 31, 2018.

Revolving Credit Facility – On September 22, 2017, we entered into a Credit Agreement (Credit Agreement) with a term of five years. The Credit Agreement provides for an \$850 million, multicurrency revolving credit facility, with a \$150 million sublimit for multicurrency borrowings, a \$75 million sublimit for letters of credit, and a \$20 million sublimit for swingline loans. The Credit Agreement includes an expansion feature which allows us, subject to certain conditions, to request an increase in the aggregate amount of the revolving credit facility or obtain incremental term loans in an amount up to \$425 million. In addition, the Credit Agreement includes provisions that allow certain of our foreign subsidiaries to borrow under the agreement. The obligations under the Credit Agreement are unsecured and are fully and unconditionally guaranteed by NewMarket. The revolving credit facility matures on September 22, 2022. We incurred financing costs totaling \$3 million related to the Credit Agreement, which are being amortized over the term of the agreement.

The outstanding borrowings under the Credit Agreement amounted to \$45 million at December 31, 2019 and \$168 million at December 31, 2018. Outstanding letters of credit amounted to \$3 million at both December 31, 2019 and December 31, 2018 resulting in the unused portion of the credit facility amounting to \$803 million at December 31, 2019 and \$679 million at December 31, 2018.

Borrowings made under the revolving credit facility bear interest, at our option, at an annual rate equal to either (1) the Alternate Base Rate (ABR) plus the Applicable Rate (as defined in the Credit Agreement) (solely in the case of loans denominated in U.S. Dollars to NewMarket) or (2) the Adjusted LIBO Rate plus the Applicable Rate. ABR is the greater of (i) the rate of interest publicly announced by the Administrative Agent as its prime rate, (ii) the NYFRB Rate (as defined in the Credit Agreement) from time to time plus 0.5%, and (iii) the Adjusted LIBO Rate for a one month interest period plus 1%. The Adjusted LIBO Rate means the rate at which Eurocurrency deposits in the London interbank market for certain periods (as selected by NewMarket) are quoted, as adjusted for statutory reserve requirements for Eurocurrency liabilities and other applicable mandatory costs. The Applicable Rate ranges from 0.0% to 0.625% (depending on our consolidated Leverage Ratio or Credit Ratings) for loans bearing interest based on the ABR. The Applicable Rate ranges from 1.00% to 1.625% (depending on our Leverage Ratio or Credit Ratings) for loans bearing interest based on the Adjusted LIBO Rate. At December 31, 2019, the Applicable Rate was 0.125% for loans bearing interest based on the ABR and 1.125% for loans bearing interest based on the Adjusted LIBO Rate.

The average interest rate for borrowings under our revolving credit facilities was 3.0% during both 2019 and 2018.

The Credit Agreement contains financial covenants that require NewMarket to maintain a consolidated Leverage Ratio (as defined in the Credit Agreement) of no more than 3.50 to 1.00 except during an Increased Leverage Period (as defined in the Credit Agreement) at the end of each quarter, and a consolidated Interest Coverage Ratio (as defined in the Credit Agreement) of no less than 3.00 to 1.00, calculated on a rolling four quarter basis, as of the end of each fiscal quarter.

At December 31, 2019, the Leverage Ratio was 1.53 and the Interest Coverage Ratio was 12.37.

We were in compliance with all covenants under the current revolving credit facility at December 31, 2019 and December 31, 2018.

Other Borrowings - Three of our subsidiaries in the U.K., Singapore, and China each have access to separate short-term lines of credit of \$10 million. There was no activity on these lines of credit in 2019, nor was there an outstanding balance on any of these lines of credit at December 31, 2018. There was no activity on these lines of credit during 2018 except for in the U.K. The average interest rate of this Euro facility during 2018 was 1%.

We had long-term debt of \$643 million at December 31, 2019 and \$771 million at December 31, 2018. The decrease in debt resulted from repaying borrowings outstanding under the revolving credit facility during 2019.

As a percentage of total capitalization (total long-term debt and shareholders' equity), our total long-term debt decreased from 61.1% at the end of 2018 to 48.5% at the end of 2019. The change in the percentage was primarily the result of the decrease in long-term debt, as well as the increase in shareholders' equity. The change in shareholders' equity primarily reflects our earnings offset by dividend payments, along with the improvement in the funded position of our defined benefit plans. Normally, we repay any outstanding long-term debt with cash from operations or refinancing activities.

Working Capital

Including cash and cash equivalents and the impact of foreign currency on the balance sheet, at December 31, 2019, we had working capital of \$571 million, resulting in a current ratio of 2.85 to 1. Our working capital at December 31, 2018 on the same basis was \$542 million, resulting in a current ratio of 3.00 to 1.

Other than the increase in cash and cash equivalents, the most significant changes in working capital since December 31, 2018 resulted from an increase in accounts receivable and a decrease in accrued expenses, which were partially offset by a decrease in inventories and an increase in accounts payable and lease liabilities. The increase in accounts receivable reflects higher sales levels in EMEAI and North America as compared to the fourth quarter of 2018 along with increases in value added and income tax refunds due. The decrease in inventories was primarily due to maintenance plant turnarounds, as well as the increased sales in the EMEAI and North America regions when comparing the fourth quarter of 2019 with the fourth quarter of 2018. The increase in lease liabilities reflects the adoption of Accounting Standard Codification 842, "Leases". See Note 16 for additional information on our leases. The changes in accounts payable and accrued expenses reflect initiatives to better manage accounts payable balances and normal timing differences.

Capital Expenditures

Capital expenditures were \$59 million for 2019 and \$75 million for 2018. We currently estimate capital expenditures in 2020 will be in the range of \$75 million to \$85 million as we anticipate spending on several improvements to our manufacturing and R&D infrastructure around the world. We expect to continue to finance capital spending through cash on hand and cash provided from operations, together with borrowing available under our \$850 million revolving credit facility.

Environmental Expenses

We spent approximately \$29 million in 2019 and \$30 million in 2018 for ongoing environmental operating and clean-up costs, excluding depreciation of previously capitalized expenditures. These environmental operating and clean-up expenses are included in cost of goods sold. We expect to continue to fund these costs through cash provided by operations.

Contractual Obligations

The table below shows our year-end contractual obligations by year due.

<i>(in millions)</i>	Payments Due by Period				
	Total	Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
Debt obligations (a)	\$ 645	\$ 0	\$395	\$ 0	\$250
Interest payable on long-term debt	111	24	49	19	19
Letters of credit (b)	3	0	0	0	3
Finance lease obligations (c)	16	3	4	2	7
Operating lease obligations (c)	82	16	21	12	33
Leases not yet commenced	23	3	4	4	12
Property, plant, and equipment purchase obligations	32	32	0	0	0
Purchase obligations (d)	550	171	284	81	14
Other long-term liabilities (e)	26	11	2	2	11
Reserves for uncertain tax positions	13	8	1	4	0
Total	<u>\$1,501</u>	<u>\$268</u>	<u>\$760</u>	<u>\$124</u>	<u>\$349</u>

- (a) Amounts represent contractual payments due on the 4.10% senior notes, revolving credit facility, and the Prudential senior unsecured notes as of December 31, 2019. See Note 13 for more information on long-term debt obligations.
- (b) We intend to renew letters of credit when necessary as they mature; therefore, the obligations do not have a definitive maturity date.
- (c) Amounts represent the undiscounted obligation for lease payments for leases having an initial lease term of at least one year.
- (d) Purchase obligations include agreements to purchase goods or services that are enforceable and legally binding and that specify all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum, or variable price provisions; and the approximate timing of the transaction. Purchase obligations exclude agreements that are cancelable without penalty. Purchase orders made in the ordinary course of business are excluded from the above table. Any amounts for which we are liable under purchase orders are reflected in our Consolidated Balance Sheets as accounts payable or accrued expenses.
- (e) These represent other long-term liability amounts reflected in our Consolidated Balance Sheets that have known payment streams. Amounts include environmental liabilities, contributions associated with pension and postretirement benefit plans, and tax payments related to the deemed repatriation of foreign earnings resulting from the Tax Reform Act. Amounts accrued for potential exposure with respect to litigation, claims, and assessments are not included in the table above.

Pension and Postretirement Benefit Plans

Our U.S. and foreign benefit plans are discussed separately below. The information applies to all of our U.S. benefit plans. Our foreign plans are quite diverse, and the actuarial assumptions used by the various foreign plans are based upon the circumstances of each particular country and retirement plan. We use a December 31 measurement date to determine our pension and postretirement expenses and related financial disclosure information. Additional information on our pension and postretirement plans is in Note 17.

U.S. Pension and Postretirement Benefit Plans—The average remaining service period of active participants for our U.S. plans is 13 years, while the average remaining life expectancy of inactive participants is 23 years. We utilize the sex distinct Pri-2012 table with separate rates for annuitants, non-annuitants, and contingent annuitants, projected generationally using Scale MP-2019 in determining the impact of the U.S. benefit plans on our financial statements.

Investment Return Assumptions and Asset Allocation—We periodically review our assumptions for the long-term expected return on pension plan assets. As part of the review and to develop expected rates of return, we considered an analysis of expected returns based on the U.S. plans' asset allocation as of both January 1, 2020 and January 1, 2019. This analysis reflects our expected long-term rates of return for each significant asset class or economic indicator. As of January 1, 2020, the expected rates were 8.5% for U.S. large cap stocks, 3.6% for fixed income, and 2.6% for inflation. The range of returns developed relies both on forecasts and on broad-market historical benchmarks for expected return, correlation, and volatility for each asset class.

The asset allocation for our U.S. pension plans is predominantly weighted toward equities. Through the ongoing monitoring of our investments and review of market data, we have determined that we should maintain the expected long-term rate of return for our U.S. pension plans at 8.5% at December 31, 2019.

An actuarial gain on the assets occurred during 2019 as the actual investment return for all of our U.S. pension plans exceeded the expected return by approximately \$75 million in 2019. An actuarial loss on the assets occurred during 2018 as the actual investment return for all of our U.S. pension plans was less than the expected return by approximately \$56 million. Investment gains and losses are recognized in earnings on an amortized basis over a period of years, resulting in increased expense of approximately \$2 million in 2020. We expect that there will be continued volatility in pension expense as actual investment returns vary from the expected return, but we continue to believe the potential long-term benefits justify the risk premium for equity investments.

At December 31, 2019, our expected long-term rate of return on our postretirement plans was 4.5%. This rate varies from the pension rate of 8.5% primarily because of the difference in investment of assets. The assets of the postretirement plan are held in an insurance contract, which results in a lower assumed rate of investment return.

Pension expense and the life insurance portion of postretirement expense are sensitive to changes in the expected return on assets. For example, decreasing the expected rate of return by 100 basis points to 7.5% for pension assets and 3.5% for postretirement benefit assets (while holding other assumptions constant) would increase the forecasted 2020 expense for our U.S. pension and postretirement plans by approximately \$5 million. Similarly, a 100 basis point increase in the expected rate of return to 9.5% for pension assets and 5.5% for postretirement benefit assets (while holding other assumptions constant) would reduce forecasted 2020 pension and postretirement expense by \$5 million.

Discount Rate Assumption—We develop the discount rate assumption by determining the single effective discount rate for a unique hypothetical portfolio constructed from investment-grade bonds that, in the aggregate, match the projected cash flows of each of our retirement plans. The discount rate is developed based on the hypothetical portfolio on the last day of December. The discount rate at December 31, 2019 was 3.5% for all plans.

Pension and postretirement benefit expense is also sensitive to changes in the discount rate. For example, decreasing the discount rate by 100 basis points to 2.5% (while holding other assumptions constant) would increase the forecasted 2020 expense for our U.S. pension and postretirement benefit plans by approximately \$8 million. A 100 basis point increase in the discount rate to 4.5% would reduce forecasted 2020 pension and postretirement benefit expense by \$6 million.

Rate of Projected Compensation Increase—We have maintained our rate of projected compensation increase at December 31, 2019 at 3.5%. The rate assumption was based on an analysis of our projected compensation increases for the foreseeable future.

Liquidity—Cash contribution requirements to the pension plan are sensitive to changes in assumed interest rates and investment gains or losses in the same manner as pension expense. We expect our aggregate cash contributions, before income taxes, to the U.S. pension plans will be approximately \$3 million in 2020. We expect our contributions to the postretirement benefit plans will be approximately \$1 million in 2020.

Foreign Pension Benefit Plans—Our foreign pension plans are quite diverse. The following information applies only to our U.K. pension plan, which represents the majority of the amounts recorded in our financial statements for our foreign pension plans. The average remaining service period of active participants for our U.K. plan is 13 years, while the average remaining life expectancy of inactive participants is 23 years. We utilize the S2P (Light) mortality tables and allow for future projected improvements in life expectancy in line with the CMI 2018 model (with the core parameters), with a long-term rate of improvement of 1% per year based on the membership of the plan, in determining the impact of the U.K. pension plans on our financial statements.

Investment Return Assumptions and Asset Allocation—We periodically review our assumptions for the long-term expected return on the U.K. pension plan assets. The expected long-term rate of return is based on both the asset allocation, as well as yields available in the U.K. markets.

The target asset allocation in the U.K. is to be invested 40% in pooled equities funds, 40% in pooled government bonds, and 20% in pooled diversified growth funds. The actual allocation at the end of 2019 was 41% in pooled equities funds, 39% in pooled government bonds, and 20% in pooled diversified growth funds. Based on the actual asset allocation and the expected yields available in the U.K. markets, the expected long-term rate of return for the U.K. pension plan was 5.3% at December 31, 2019.

An actuarial gain on the assets occurred during 2019 as the actual investment return exceeded the expected investment return by approximately \$10 million in 2019. An actuarial loss on the assets occurred during 2018 as the actual investment return was less than the expected investment return by approximately \$16 million. Investment gains and losses are recognized in earnings on an amortized basis over a period of years. The amortization of the actuarial net loss is expected to be approximately \$1 million in 2020 resulting primarily from the actuarial loss on the plan liabilities, which has only partially been offset by investment gains on the plan assets. We expect that there will be continued volatility in pension expense as actual investment returns vary from the expected return, but we continue to believe the potential benefits justify the risk premium for the target asset allocation.

Pension expense is sensitive to changes in the expected return on assets. For example, decreasing the expected rate of return by 100 basis points to 4.3% (while holding other assumptions constant) would increase the forecasted 2020 expense for our U.K. pension plan by approximately \$2 million. Similarly, a 100 basis point increase in the expected rate of return to 6.3% (while holding other assumptions constant) would reduce forecasted 2020 pension expense by approximately \$2 million.

Discount Rate Assumption—We utilize a yield curve based on AA-rated corporate bond yields in developing a discount rate assumption. The yield appropriate to the duration of the U.K. plan liabilities is then used. The discount rate at December 31, 2019 was 2.1%.

Pension expense is also sensitive to changes in the discount rate. For example, decreasing the discount rate by 100 basis points to 1.1% (while holding other assumptions constant) would increase the forecasted 2020 expense for our U.K. pension plans by approximately \$1 million. A 100 basis point increase in the discount rate to 3.1% would reduce forecasted 2020 pension expense by approximately \$1 million.

Rate of Projected Compensation Increase—Our rate of projected compensation increase at December 31, 2019 is 4.1%. The rate assumption was based on an analysis of our projected compensation increases for the foreseeable future.

Liquidity—Cash contribution requirements to the U.K. pension plan are sensitive to changes in assumed interest rates and investment gains or losses. We expect our aggregate U.K. cash contributions, before income taxes, will be approximately \$4 million in 2020.

OUTLOOK

Our stated goal is to provide a 10% compounded return per year for our shareholders over any five-year period (defined by earnings per share growth plus dividend yield), although we may not necessarily achieve a 10% return each year. We continue to have confidence in our customer-focused strategy and approach to the market. We believe the fundamentals of how we run our business - a long-term view, safety-first culture, customer-focused solutions, technology-driven product offerings, and world-class supply chain capability - will continue to be beneficial for all of our stakeholders over the long term.

We expect our petroleum additives segment to deliver another year of solid performance in 2020. We expect that the petroleum additives market will grow in the 1% to 2% range annually for the foreseeable future, and we plan to exceed that growth rate over the long-term.

In the past several years we have made significant investments in our business as the industry fundamentals remain positive. These investments have been and will continue to be in organizational talent, technology development and processes, and global infrastructure, consisting of technical centers, production capability, and geographic expansion. We intend to utilize these investments to improve our ability to deliver the solutions that our customers value, expand our global reach, and enhance our operating results. We will continue to invest in our capabilities to provide even better value, service, technology, and customer solutions.

Our business generates significant amounts of cash beyond what is necessary for the expansion and growth of our current offerings. We regularly review our many internal opportunities to utilize excess cash from technological, geographic, production capability, and product line perspectives. We believe our capital spending is creating the capability we need to grow and support our customers worldwide, and our research and development investments are positioning us well to provide added value to our customers. Our primary focus in the acquisition area remains on the petroleum additives industry. It is our view that this industry segment will provide the greatest opportunity for solid returns on our investments while minimizing risk. We remain focused on this strategy and will evaluate any future opportunities. We will continue to evaluate all alternative uses of cash to enhance shareholder value, including stock repurchases and dividends.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The following discussion highlights some of the more critical areas where a significant change in facts and circumstances in our operating and financial environment could cause a change in future reported financial results.

Income Taxes

We file United States, foreign, state, and local income tax returns. Significant judgment is required in determining our worldwide provision for income taxes and recording the related tax assets and liabilities. Any significant impact as a result of changes in underlying facts, law, tax rates, or tax audits could lead to adjustments to our income tax expense, effective tax rate, financial position, or cash flow.

Deferred income taxes are provided for the estimated income tax effect of temporary differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities, as well as for net operating losses and tax credit carryforwards. When recording these deferred tax assets and liabilities, we must estimate the tax rates we expect will apply to taxable income in the periods in which the deferred tax liability or asset is expected to be settled or realized. In addition, we may record valuation allowances to reduce deferred tax assets if it is more likely than not that some portion or all of the deferred tax assets will not be realized. Judgment is required as we consider the scheduled reversal of deferred tax assets and liabilities, projected future taxable income, and tax planning strategies in making this assessment. If our estimates and assumptions change from those used when we recorded deferred tax assets and liabilities, the effect on our results of operations and financial position could be material.

The income tax returns for our entities in the United States and in foreign jurisdictions are open for examination by tax authorities. We assess our income tax positions and record a liability for all years open for examination based upon our evaluation of the facts, circumstances, and information available at the reporting date. The economic benefit associated with a tax position will be recognized only if we determine it is more likely than not to be upheld on audit. Although we believe our estimates and judgments are reasonable, actual results could differ, resulting in gains or losses that may be material to our results of operations and financial position.

At each interim reporting period, we estimate an effective income tax rate that is expected to be applicable for the full year. Our provision for income taxes is impacted by the income tax rates of the countries where we operate. A change in the geographical source of our income can affect the effective tax rate. Significant judgment is involved regarding the application of global income tax laws and regulations when projecting the jurisdictional mix of income. Additionally, interpretations of tax laws, court decisions, or other guidance provided by taxing authorities influence our estimate of the effective income tax rate. As a result, our actual effective income tax rate and related income tax liabilities may differ materially from our estimated effective tax rate and related income tax liabilities.

Intangibles (net of amortization) and Goodwill

We have certain identifiable intangibles amounting to \$9 million and goodwill amounting to \$123 million at December 31, 2019 that are discussed in Note 10. These intangibles and goodwill relate to our petroleum additives business. The intangibles are being amortized over periods with up to approximately 9 years of remaining life. We continue to assess the market related to the intangibles and goodwill, as well as their specific values and evaluate the intangibles and goodwill for any potential impairment when significant events or circumstances occur that might impair the value of these assets. We have concluded the values are appropriate, as are the amortization periods for the intangibles. However, if conditions were to substantially deteriorate in the petroleum additives market, it could possibly cause a decrease in the estimated useful lives of the intangible assets or result in a noncash write-off of all or a portion of the intangibles and goodwill carrying amounts. A reduction in the amortization period of the intangibles would have no effect on cash flows. We do not anticipate such a change in the market conditions in the near term.

Pension Plans and Other Postretirement Benefits

We use assumptions to record the impact of the pension and postretirement benefit plans in the financial statements. These assumptions include the discount rate and the expected long-term rate of return on plan assets. A change in any of these assumptions could cause different results for the plans and therefore, impact our results of operations, cash flows, and financial condition. We develop these assumptions after considering available information that we deem relevant. Information is provided on the pension and postretirement plans in Note 17. In addition, further disclosure of the effect of changes in these assumptions is provided in the “Financial Position and Liquidity” section of Item 7.

Environmental and Legal Proceedings

We have disclosed our environmental matters in Item 1 of this Annual Report on Form 10-K, as well as in Note 20. Our estimates for costs that will be incurred to satisfy our obligations related to environmental matters are affected by many variables, including our judgment regarding the extent of remediation that will be required, future changes in and enforcement and interpretation of laws and regulations, current and future technology available, and timing of remediation activities. While we currently do not anticipate significant changes to the many factors that could impact our environmental requirements, we continue to keep our accruals consistent with these requirements as they change.

Also, as noted in the discussion of “Legal Proceedings” in Item 3 of this Annual Report on Form 10-K, while it is not possible to predict or determine with certainty the outcome of any legal proceeding, it is our opinion, based

on our current knowledge, that we will not experience any material adverse effects on our results of operations, cash flows, or financial condition as a result of any pending or threatened proceeding.

RECENTLY ISSUED ACCOUNTING STANDARDS

For a full discussion of the more significant recently issued accounting standards, see Note 23.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to many market risk factors, including fluctuations in interest and foreign currency rates, as well as changes in the cost of raw materials. These risk factors may affect our results of operations, cash flows, and financial position.

We manage these risks through regular operating and financing methods, including the use of derivative financial instruments. When we have derivative instruments, they are with major financial institutions and are not for speculative or trading purposes. Also, as part of our financial risk management, we regularly review significant contracts for embedded derivatives and, if identified, would record them in accordance with accounting principles generally accepted in the United States.

The following analysis presents the effect on our results of operations, cash flows, and financial position as if the hypothetical changes in market risk factors occurred at December 31, 2019. We analyzed only the potential impacts of our hypothetical assumptions. This analysis does not consider other possible effects that could impact our business.

Interest Rate Risk

At December 31, 2019, we had total long-term debt of \$643 million. Of the total long-term debt, \$600 million is at fixed rates. There was no interest rate risk at the end of the year associated with the fixed rate debt.

At December 31, 2019, we had \$45 million of outstanding variable rate debt under our revolving credit facility. Holding all other variables constant, if the variable portion of the interest rates hypothetically increased 10%, the effect on our earnings and cash flows would not be material.

A hypothetical 100 basis point decrease in interest rates, holding all other variables constant, would have resulted in a change of \$28 million in fair value of our debt at December 31, 2019.

Foreign Currency Risk

We sell to customers in foreign markets through our foreign subsidiaries, as well as through export sales from the United States. These transactions are often denominated in currencies other than the U.S. Dollar. Our primary currency exposures are the European Union Euro, British Pound Sterling, Japanese Yen, Chinese Renminbi, Indian Rupee, Singapore Dollar, Mexican Peso, Australian Dollar, and Canadian Dollar. We may enter into forward contracts as hedges to minimize the fluctuation of intercompany accounts receivable denominated in foreign currencies. At December 31, 2019, we had no outstanding forward contracts.

Raw Material Price Risk

We utilize a variety of raw materials in the manufacture of our products, including base oil, polyisobutylene, antioxidants, alcohols, solvents, sulfonates, friction modifiers, olefins, and copolymers. We may also enter into contracts which commit us to purchase some of our more critical raw materials based on anticipated demand. Our profitability is sensitive to changes in the quantities of raw materials we may need and the costs of those materials which may be caused by changes in supply, demand or other market conditions, over which we have

little or no control. In addition, political and economic conditions in certain regions of the world in which we operate have caused, and may continue to cause, our demand for and the cost of our raw materials to fluctuate. War, armed hostilities, terrorist acts, civil unrest, or other incidents may also cause a sudden or sharp change in our demand for and the cost of our raw materials. If we experience such increases in the cost of our raw materials, we may not be able to pass them along to our customers in the form of price increases for our products. The inability to do so would have a negative impact on our operating profit. In addition, if our demand for raw materials were to decline such that we would not have need for the quantities required to be purchased under commitment agreements, we could incur additional charges that would affect our profitability.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of NewMarket Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of NewMarket Corporation and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of income, of comprehensive income, of shareholders’ equity and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 23 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinions

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

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

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

audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

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

Valuation of Pension Benefit Obligation

As described in Note 17 to the consolidated financial statements, the Company's consolidated pension benefit obligation, excluding other postretirement benefits, was \$609 million as of December 31, 2019. Management develops the actuarial assumptions used by various US and foreign plans based upon the circumstances of each particular country and pension plan. As disclosed by management, the determination of the pension benefit obligation requires the use of estimates and assumptions. Management's significant assumption in the determination of the pension benefit obligation is the discount rate.

The principal considerations for our determination that performing procedures relating to the valuation of the pension benefit obligation is a critical audit matter are there was significant judgment by management to determine the pension benefit obligation. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate management's significant assumption used in the valuation of the pension benefit obligation, specifically the discount rate. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained from these procedures.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation of the pension benefit obligation, including controls over the Company's methods, significant assumption, and data. These procedures also included, among others, testing the

completeness, accuracy, and relevance of underlying data used in the valuation of the pension benefit obligation. With the involvement of professionals with specialized skill and knowledge to assist, these procedures also included testing management's process for determining the pension benefit obligation, evaluating the appropriateness of the methods, and evaluating the reasonableness of the significant assumption, specifically the discount rate.

/s/ PricewaterhouseCoopers LLP

Richmond, Virginia

February 18, 2020

We have served as the Company's or its predecessor's auditor since 1947.

NewMarket Corporation and Subsidiaries

Consolidated Statements of Income

<i>(in thousands, except per-share amounts)</i>	Years Ended December 31,		
	2019	2018	2017
Net sales	\$2,190,295	\$2,289,675	\$2,198,404
Cost of goods sold	1,560,426	1,704,312	1,562,017
Gross profit	629,869	585,363	636,387
Selling, general, and administrative expenses	148,083	152,400	167,651
Research, development, and testing expenses	144,465	140,289	146,002
Operating profit	337,321	292,674	322,734
Interest and financing expenses, net	29,241	26,723	21,856
Other income (expense), net	23,510	24,334	14,564
Income before income tax expense	331,590	290,285	315,442
Income tax expense	77,304	55,551	124,933
Net income	<u>\$ 254,286</u>	<u>\$ 234,734</u>	<u>\$ 190,509</u>
Earnings per share - basic and diluted	<u>\$ 22.73</u>	<u>\$ 20.34</u>	<u>\$ 16.08</u>

See accompanying Notes to Consolidated Financial Statements

NewMarket Corporation and Subsidiaries

Consolidated Statements of Comprehensive Income

<i>(in thousands)</i>	Years Ended December 31,		
	2019	2018	2017
Net income	\$254,286	\$234,734	\$190,509
Other comprehensive income (loss):			
Pension plans and other postretirement benefits:			
Prior service credit (cost) arising during the period, net of income tax expense (benefit) of \$(257) in 2019 and \$(91) in 2018	(756)	(446)	0
Amortization of prior service cost (credit) included in net periodic benefit cost (income), net of income tax expense (benefit) of \$(681) in 2019, \$(720) in 2018 and \$(1,127) in 2017	(2,211)	(2,363)	(1,955)
Actuarial net gain (loss) arising during the period, net of income tax expense (benefit) of \$5,952 in 2019, \$(6,976) in 2018 and \$2,814 in 2017	16,739	(24,581)	10,966
Amortization of actuarial net loss (gain) included in net periodic benefit cost (income), net of income tax expense (benefit) of \$901 in 2019, \$1,381 in 2018 and \$2,028 in 2017	2,988	4,355	3,656
Total pension plans and other postretirement benefits	16,760	(23,035)	12,667
Foreign currency translation adjustments, net of income tax expense (benefit) of \$(181) in 2019, \$(535) in 2018 and \$703 in 2017	1,808	(12,287)	23,849
Other comprehensive income (loss)	18,568	(35,322)	36,516
Comprehensive income	\$272,854	\$199,412	\$227,025

See accompanying Notes to Consolidated Financial Statements

NewMarket Corporation and Subsidiaries

Consolidated Balance Sheets

<i>(in thousands, except share amounts)</i>	December 31,	
	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 144,397	\$ 73,040
Trade and other accounts receivable, net	335,826	314,860
Inventories	365,938	396,341
Prepaid expenses and other current assets	33,237	29,179
Total current assets	879,398	813,420
Property, plant, and equipment, net	635,439	644,138
Intangibles (net of amortization) and goodwill	131,880	136,039
Prepaid pension cost	133,848	88,705
Operating lease right-of-use assets	60,505	0
Deferred income taxes	6,327	5,094
Deferred charges and other assets	37,735	9,878
Total assets	\$1,885,132	\$1,697,274
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 178,773	\$ 151,631
Accrued expenses	77,350	91,202
Dividends payable	19,217	17,923
Income taxes payable	10,632	6,431
Operating lease liabilities	14,036	0
Other current liabilities	8,887	4,114
Total current liabilities	308,895	271,301
Long-term debt	642,941	770,999
Operating lease liabilities - noncurrent	46,792	0
Other noncurrent liabilities	203,406	165,067
Total liabilities	1,202,034	1,207,367
Commitments and contingencies (Note 20)		
Shareholders' equity:		
Common stock and paid-in capital (without par value; authorized shares - 80,000,000; issued and outstanding - 11,188,549 at December 31, 2019 and 11,184,482 at December 31, 2018)	1,965	0
Accumulated other comprehensive loss	(162,748)	(181,316)
Retained earnings	843,881	671,223
Total shareholders' equity	683,098	489,907
Total liabilities and shareholders' equity	\$1,885,132	\$1,697,274

See accompanying Notes to Consolidated Financial Statements

NewMarket Corporation and Subsidiaries

Consolidated Statements of Shareholders' Equity

<i>(in thousands, except share and per-share amounts)</i>	Common Stock and Paid-in Capital		Accumulated Other Comprehensive Loss	Retained Earnings	Total Shareholders' Equity
	Shares	Amount			
Balance at December 31, 2016	11,845,972	\$ 1,603	\$(182,510)	\$ 664,158	\$ 483,251
Net income				190,509	190,509
Other comprehensive income (loss)			36,516		36,516
Cash dividends (\$7.00 per share)				(82,885)	(82,885)
Repurchases of common stock	(70,689)	(3,607)		(24,150)	(27,757)
Tax withholdings related to stock-based compensation	(2,328)	(915)			(915)
Stock-based compensation	7,023	2,919		11	2,930
Balance at December 31, 2017	11,779,978	0	(145,994)	747,643	601,649
Net income				234,734	234,734
Other comprehensive income (loss)			(35,322)		(35,322)
Cash dividends (\$7.00 per share)				(80,448)	(80,448)
Repurchases of common stock	(603,449)	(2,038)		(229,978)	(232,016)
Tax withholdings related to stock-based compensation	(2,055)			(740)	(740)
Stock-based compensation	10,008	2,038		12	2,050
Balance at December 31, 2018	11,184,482	0	(181,316)	671,223	489,907
Net income				254,286	254,286
Other comprehensive income (loss)			18,568		18,568
Cash dividends (\$7.30 per share)				(81,676)	(81,676)
Tax withholdings related to stock-based compensation	(603)	(304)			(304)
Stock-based compensation	4,670	2,269		48	2,317
Balance at December 31, 2019	<u>11,188,549</u>	<u>\$ 1,965</u>	<u>\$(162,748)</u>	<u>\$ 843,881</u>	<u>\$ 683,098</u>

See accompanying Notes to Consolidated Financial Statements

NewMarket Corporation and Subsidiaries

Consolidated Statements of Cash Flows

<i>(in thousands)</i>	Years Ended December 31,		
	2019	2018	2017
Cash and cash equivalents at beginning of year	\$ 73,040	\$ 84,166	\$ 192,154
Cash flows from operating activities:			
Net income	254,286	234,734	190,509
Adjustments to reconcile net income to cash flows from operating activities:			
Depreciation and amortization	87,560	71,759	55,340
Deferred income tax expense	7,384	14,527	27,375
Tax Reform Act expense	0	0	31,375
Change in assets and liabilities:			
Trade and other accounts receivable, net	(22,587)	14,096	250
Inventories	31,884	(29,672)	(44,936)
Prepaid expenses and other current assets	(2,742)	702	(2,715)
Accounts payable and accrued expenses	8,859	(19,638)	17,955
Operating lease liabilities	(16,496)	0	0
Other current liabilities	1,866	(10,169)	1,595
Income taxes payable	3,979	(9,731)	(8,475)
Cash pension and postretirement contributions	(9,932)	(64,756)	(26,264)
Other, net	(6,849)	(3,941)	786
Cash provided from (used in) operating activities	337,212	197,911	242,795
Cash flows from investing activities:			
Capital expenditures	(59,434)	(74,638)	(148,713)
Acquisition of business (net of \$1,131 cash acquired)	0	0	(183,930)
Other, net	0	14,607	(2,000)
Cash provided from (used in) investing activities	(59,434)	(60,031)	(334,643)
Cash flows from financing activities:			
Net (repayments) borrowings under revolving credit facility	(123,451)	168,129	(156,000)
Issuance of 3.78% senior notes	0	0	250,000
Dividends paid	(81,676)	(80,448)	(82,885)
Repurchases of common stock	0	(232,016)	(25,998)
Other, net	(2,952)	(1,092)	(4,093)
Cash provided from (used in) financing activities	(208,079)	(145,427)	(18,976)
Effect of foreign exchange on cash and cash equivalents	1,658	(3,579)	2,836
Increase (decrease) in cash and cash equivalents	71,357	(11,126)	(107,988)
Cash and cash equivalents at end of year	\$ 144,397	\$ 73,040	\$ 84,166

See accompanying Notes to Consolidated Financial Statements

Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Consolidation—Our consolidated financial statements include the accounts of NewMarket Corporation and its subsidiaries. All intercompany transactions are eliminated upon consolidation. References to “we,” “us,” “our,” the “company,” and “NewMarket” are to NewMarket Corporation and its consolidated subsidiaries, unless the context indicates otherwise.

NewMarket is the parent company of three operating companies, each managing its own assets and liabilities. Those companies are Afton, which focuses on petroleum additive products; Ethyl, representing certain contracted manufacturing and services, as well as the antiknock compounds business; and NewMarket Development, which manages the property and improvements that we own in Virginia. NewMarket is also the parent company of NewMarket Services, which provides various administrative services to NewMarket, Afton, Ethyl, and NewMarket Development.

Certain reclassifications have been made to the accompanying consolidated financial statements and the related notes to conform to the current presentation.

Foreign Currency Translation—We translate the balance sheets of our foreign subsidiaries into U.S. Dollars based on the current exchange rate at the end of each period. We translate the statements of income using the weighted-average exchange rates for the period. NewMarket includes translation adjustments in the Consolidated Balance Sheets as part of accumulated other comprehensive loss and transaction adjustments in the Consolidated Statements of Income as part of cost of goods sold. Foreign currency transaction adjustments resulted in a net loss of \$4 million in 2019, a net loss of \$8 million in 2018, and a net gain of \$5 million 2017.

Revenue Recognition—We recognize revenue when control of the product is transferred to our customer and for an amount that reflects the consideration we expect to collect from the customer. Net sales (revenues) are reported at the gross amount billed, including amounts related to shipping that are charged to the customer. Provisions for rebates to customers are recorded in the same period that the related sales are recorded. Freight costs incurred on the delivery of products are included in the Consolidated Statements of Income in cost of goods sold. Our standard terms of delivery are included in our contracts, sales order confirmation documents, and invoices. Taxes assessed by a governmental authority concurrent with sales to our customers, including sales, use, value-added, and revenue-related excise taxes, are not included as net sales, but are reflected in accrued expenses until remitted to the appropriate governmental authority.

Cash and Cash Equivalents—Our cash equivalents consist of government obligations and commercial paper with original maturities of 90 days or less. Throughout the year, we have cash balances in excess of federally insured amounts on deposit with various financial institutions. We state cash and cash equivalents at cost, which approximates fair value.

Accounts Receivable—We record our accounts receivable at net realizable value. We maintain an allowance for doubtful accounts for estimated losses resulting from our customers not making required payments. We determine the adequacy of the allowance by periodically evaluating each customer’s receivable balance, considering their financial condition and credit history, and considering current economic conditions. The allowance for doubtful accounts was not material at December 31, 2019 or December 31, 2018.

Inventories—NewMarket values its inventories at the lower of cost or net realizable value. In the United States, cost is determined on the last-in, first-out (LIFO) basis. In all other countries, we determine cost using a weighted-average method. Inventory cost includes raw materials, direct labor, and manufacturing overhead.

Notes to Consolidated Financial Statements

Property, Plant, and Equipment—We state property, plant, and equipment at cost and compute depreciation by the straight-line method based on the estimated useful lives of the assets. We capitalize expenditures for significant improvements that extend the useful life of the related property. We expense repairs and maintenance, including plant turnaround costs, as incurred. When property is sold or retired, we remove the cost and accumulated depreciation from the accounts and any related gain or loss is included in earnings.

Intangibles (Net of Amortization) and Goodwill—Identifiable intangibles include the cost of acquired contracts, formulas and technology, trademarks and trade names, and customer bases. We assign a value to identifiable intangibles based on independent third-party appraisals and management's assessment at the time of acquisition. NewMarket amortizes the cost of the customer bases by an accelerated method and the cost of the remaining identifiable intangibles by the straight-line method over the estimated economic life of the intangible.

Goodwill arises from the excess of cost over the net assets of businesses acquired. Goodwill represents the residual purchase price after allocation to all identifiable net assets. We test goodwill for impairment each year, as well as whenever a significant event or circumstance occurs which could reduce the fair value of the reporting unit to which the goodwill applies below the carrying amount of the reporting unit.

Impairment of Long-Lived Assets—When significant events or circumstances occur that might impair the value of long-lived assets, we evaluate recoverability of the recorded cost of these assets. Assets are considered to be impaired if their carrying amount is not recoverable from the estimated undiscounted future cash flows associated with the assets. If we determine an asset is impaired and its recorded cost is higher than estimated fair market value based on the estimated present value of future cash flows, we adjust the asset to estimated fair market value.

Environmental Costs—NewMarket capitalizes environmental compliance costs if they extend the useful life of the related property or prevent future contamination. Environmental compliance costs also include maintenance and operation of pollution prevention and control facilities. We expense these compliance costs in cost of goods sold as incurred.

Accrued environmental remediation and monitoring costs relate to an existing condition caused by past operations. NewMarket accrues these costs in current operations within cost of goods sold in the Consolidated Statements of Income when it is probable that we have incurred a liability and the amount can be reasonably estimated. These estimates are based on an assessment of the site, available clean-up methods, and prior experience in handling remediation.

When we can reliably determine the amount and timing of future cash flows, we discount these liabilities, incorporating an inflation factor.

Legal Costs—We expense legal costs in the period incurred.

Employee Savings Plan—Most of our full-time salaried and hourly employees may participate in defined contribution savings plans. Employees who are covered by collective bargaining agreements may also participate in a savings plan according to the terms of their bargaining agreements. Employees, as well as NewMarket, contribute to the plans. We made contributions of \$6 million in 2019, \$6 million in 2018, and \$6 million in 2017 related to these plans.

Research, Development, and Testing Expenses—NewMarket expenses all research, development, and testing costs as incurred. R&D costs include personnel-related costs, as well as internal and external testing of our products.

Notes to Consolidated Financial Statements

Income Taxes—We recognize deferred income taxes for temporary differences between the financial reporting basis and the income tax basis of assets and liabilities. We also adjust for changes in tax rates and laws at the time the changes are enacted. A valuation allowance is recorded when it is more likely than not that a deferred tax asset will not be realized. We typically remove a tax impact from accumulated other comprehensive loss when the underlying circumstance which gave rise to the tax impact no longer exists. We recognize accrued interest and penalties associated with uncertain tax positions as part of income tax expense on our Consolidated Statements of Income.

Leases—We determine if an arrangement includes a lease at the inception of the agreement. The right-of-use asset and lease liability is determined at the lease commencement date and is based on the present value of estimated lease payments.

Our lease agreements contain both fixed and variable lease payments. In some cases, variable lease payments are based on a rate or an index. Fixed lease payments, as well as variable lease payments which are based on a rate or index, are included in the determination of the right-of-use asset and lease liability. Variable lease payments that are not based on a rate or index are expensed when incurred.

The present value of estimated lease payments is determined utilizing the rate implicit in the lease agreement, if that rate can be determined. If the implicit rate cannot be determined, the present value of estimated lease payments is determined utilizing our incremental borrowing rate. The incremental borrowing rate is determined at the lease commencement date and is developed utilizing a readily available market interest rate curve adjusted for our credit quality.

Some of our leases include an option to renew that can extend the lease term. For those leases which are reasonably certain to be renewed, we include the renewal in the lease term.

We do not recognize leases with terms of 12 months or less on the balance sheet for any lease class, except the railcar lease class. For the short-term leases not recorded on the balance sheet, the lease payments are recognized in the consolidated statements of income on a straight-line basis over the lease term.

We account for the lease and nonlease components as a single lease component in determining the right-of-use assets and lease liabilities for all lease classes.

Derivative Financial Instruments and Hedging Activities—We are exposed to certain risks arising from both our business operations and economic conditions. We manage our exposures to a wide variety of business and operational risks through management of our core business activities.

We manage certain economic risks, including interest rate, liquidity, and credit risk primarily by managing the amount, sources, and duration of our debt funding, as well as through the use of derivative financial instruments. We sometimes enter into interest rate swaps to manage our exposure to interest rate movements.

In addition, our foreign operations expose us to fluctuations of foreign exchange rates. These fluctuations may impact our results of operations, financial position, and cash flows. To manage this exposure, we sometimes enter into foreign currency forward contracts to minimize currency exposure due to cash flows from foreign operations.

We record all derivatives on the balance sheet at fair value. The accounting for changes in the fair value of derivatives depends on the intended use of the derivative, whether we have elected to designate a derivative in a hedging relationship and apply hedge accounting, and whether the hedging relationship has satisfied the criteria necessary to apply hedge accounting. We may enter into derivative contracts that are intended to economically

Notes to Consolidated Financial Statements

hedge certain of our risks, even though hedge accounting does not apply or we elect not to apply hedge accounting. We do not enter into derivative instruments for speculative purposes. We had no derivative financial instruments outstanding at December 31, 2019 or December 31, 2018.

Stock-based Compensation—We calculate the fair value of restricted stock and restricted stock units based on the closing price of our common stock on the date of grant. If award recipients are entitled to receive dividends during the vesting period, we make no adjustment to the fair value of the award for dividends. If the award does not entitle recipients to dividends during the vesting period, we reduce the grant-date price of our common stock by the present value of the dividends expected to be paid on the underlying shares during the vesting period, discounted at the risk-free interest rate.

We recognize stock-based compensation expense for the number of awards expected to vest on a straight-line basis over the requisite service period.

Estimates and Risks Due to Concentration of Business—The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

In addition, our financial results can be influenced by certain risk factors. Some of our significant concentrations of risk include the following:

- reliance on a small number of significant customers;
- customers concentrated in the fuel and lubricant industries; and
- production of several of our products solely at one facility.

2. Net Sales

On January 1, 2018, we adopted Accounting Standards Codification 606 (ASC 606), “Revenue from Contracts with Customers” using the modified retrospective method and applying the standard only to uncompleted contracts at the date of adoption. The impact of adopting ASC 606 did not result in a change to income, and therefore we did not reflect a cumulative effect to the opening balance of retained earnings due to the adoption of ASC 606. The comparative period of 2018 has been presented using this standard, while 2017 is reported under the accounting standard in effect at that time.

Our revenues are primarily derived from the manufacture and sale of petroleum additives products. We sell petroleum additives products across the world including to customers located in the North America, Latin America, Asia Pacific, and EMEAI regions. Our customers primarily consist of global, national, and independent oil companies. While some of our customers have payment terms beyond 30 days, we do not provide extended payment terms of a year or more, nor do our contracts include a financing component. Our allowance for doubtful accounts is immaterial, as are any bad debts we incur. In limited cases, we collect funds in advance of shipping product to our customers and recognizing the related revenue. These prepayments from customers are recorded as a contract liability to our customer until we recognize the revenue. Prepayments from our customers totaled \$1 million in December 31, 2019 and \$1 million in December 31, 2018. Revenue recognized from funds collected in advance from customers in an earlier period was \$1 million in 2019 and \$3 million in December 31, 2018.

We recognize revenue when control of the product is transferred to our customer and for an amount that reflects the consideration we expect to collect from the customer. Control is generally transferred to the customer when title transfers (which may include physical possession by the customer), we have a right to payment from the

Notes to Consolidated Financial Statements

customer, the customer has accepted the product, and the customer has assumed the risks and rewards of ownership. We have supplier managed inventory arrangements with some of our customers to facilitate on-demand product availability. In some cases, the inventory resides at a customer site, although title has not transferred, we are not entitled to payment, and we have not invoiced for the product. We have evaluated the contract terms under these arrangements and have determined that control transfers when the customer uses the product, at which time revenue is recognized. Our contracts generally include one performance obligation, which is providing petroleum additives products. The performance obligation is satisfied at a point in time when products are shipped, delivered, or consumed by the customer, depending on the underlying contracts.

Taxes assessed by a governmental authority which are concurrent with sales to our customers, including sales, use, value-added, and revenue-related excise taxes, are collected by us from the customer and are not included in net sales, but are reflected in accrued expenses until remitted to the appropriate governmental authority. When we are responsible for shipping and handling costs after title has transferred, we account for those as fulfillment costs and include them in cost of goods sold.

Some of our contracts include variable consideration in the form of rebates or business development funds. We record rebates at the point of sale as contra-revenue when we can reasonably estimate the amount of the rebate. The estimates are based on our best judgment at the time of sale, which includes anticipated as well as historical performance. Depending upon the specific terms of a business development fund, amounts are accrued as contra-revenue at the point of sale or are expensed when costs are incurred by us. We regularly review both rebates and business development funds and make adjustments when necessary, recognizing the full amount of any adjustment in the period identified. We recognized an increase to net sales of \$1 million for 2019 and \$3 million for 2018 related to adjustments to rebates or business development funds which were recognized in revenue in a prior period. At December 31, 2019, accrued rebates were \$23 million and accrued business development funds were \$2 million. At December 31, 2018, accrued rebates were \$25 million and accrued business developments funds were \$2 million.

The following table provides information on our net sales by geographic area. Information on net sales by segment is in Note 4.

<i>(in thousands)</i>	Twelve Months Ended December 31,	
	2019	2018
Net sales		
United States	\$ 728,125	\$ 722,576
China	225,498	239,406
Europe, Middle East, Africa, India	700,081	756,258
Asia Pacific, except China	311,469	335,119
Other foreign	225,122	236,316
Net sales	<u>\$2,190,295</u>	<u>\$2,289,675</u>

3. Earnings Per Share

We had 20,441 shares in 2019, 18,892 shares in 2018, and 16,708 shares in 2017 of nonvested restricted stock that were excluded from the calculation of diluted earnings per share, as their effect on earnings per share would be anti-dilutive.

The nonvested restricted stock is considered a participating security since the restricted stock contains nonforfeitable rights to dividends. As such, we use the two-class method to compute basic and diluted earnings

Notes to Consolidated Financial Statements

per share for all periods presented. The following table illustrates the earnings allocation method utilized in the calculation of basic and diluted earnings per share.

<i>(in thousands, except per-share amounts)</i>	Years Ended December 31,		
	2019	2018	2017
Earnings per share numerator:			
Net income attributable to common shareholders before allocation of earnings to participating securities	\$254,286	\$234,734	\$190,509
Earnings allocated to participating securities	441	474	356
Net income attributable to common shareholders after allocation of earnings to participating securities	\$253,845	\$234,260	\$190,153
Earnings per share denominator:			
Weighted-average number of shares of common stock outstanding - basic and diluted	11,166	11,515	11,824
Earnings per share - basic and diluted	\$ 22.73	\$ 20.34	\$ 16.08

4. Segment and Geographic Area Information

Segment Information—The tables below show our consolidated segment results. The “All other” category includes the operations of the antiknock compounds business, as well as certain contracted manufacturing and services associated with Ethyl.

The segment accounting policies are the same as those described in Note 1. We evaluate the performance of the petroleum additives business based on segment operating profit. NewMarket Services departments and other expenses are billed to Afton and Ethyl based on the services provided under the holding company structure. Depreciation on segment property, plant, and equipment, as well as amortization of segment intangible assets and lease right-of-use assets for 2019, are included in segment operating profit. No transfers occurred between the petroleum additives segment and the “All other” category during the periods presented. The table below reports net sales and operating profit by segment, as well as a reconciliation to income before income tax expense, for the last three years.

Notes to Consolidated Financial Statements

<i>(in thousands)</i>	Years Ended December 31,		
	2019	2018	2017
Net sales			
Petroleum additives			
Lubricant additives	\$1,778,473	\$1,870,803	\$1,790,254
Fuel additives	397,431	410,000	397,029
Total	2,175,904	2,280,803	2,187,283
All other	14,391	8,872	11,121
Net sales (a)	<u>\$2,190,295</u>	<u>\$2,289,675</u>	<u>\$2,198,404</u>
Segment operating profit			
Petroleum additives	\$ 359,228	\$ 311,019	\$ 345,017
All other	(1,562)	(3,256)	4,135
Segment operating profit	357,666	307,763	349,152
Corporate, general, and administrative expenses	(20,345)	(19,651)	(26,641)
Interest and financing expenses, net	(29,241)	(26,723)	(21,856)
Other income (expense), net	23,510	28,896	14,787
Income before income tax expense ...	<u>\$ 331,590</u>	<u>\$ 290,285</u>	<u>\$ 315,442</u>

(a) No single customer accounted for 10% or more of our total net sales in 2019, 2018, or 2017.

The following tables show asset information by segment and the reconciliation to consolidated assets. Segment assets consist of accounts receivable, inventory, and long-lived assets. Long-lived assets included in the petroleum additives segment amounts in the table below include property, plant, and equipment, net of depreciation and intangibles (net of amortization) and goodwill, as well as lease right-of-use assets for 2019. The additions to long-lived assets include only property, plant, and equipment for each year presented and lease right-of-use assets for 2019.

<i>(in thousands)</i>	December 31,	
	2019	2018
Segment assets		
Petroleum additives	\$1,506,690	\$1,448,737
All other	14,519	12,200
	1,521,209	1,460,937
Cash and cash equivalents	144,397	73,040
Other accounts receivable	6,068	1,310
Deferred income taxes	6,327	5,094
Prepaid expenses and other current assets	33,237	29,179
Non-segment property, plant, and equipment, net	34,648	33,134
Prepaid pension cost	133,848	88,705
Lease right-of-use assets	302	0
Deferred charges and other assets	5,096	5,875
Total assets	<u>\$1,885,132</u>	<u>\$1,697,274</u>

Notes to Consolidated Financial Statements

<i>(in thousands)</i>	Years Ended December 31,		
	2019	2018	2017
Additions to long-lived assets			
Petroleum additives	\$85,711	\$72,829	\$196,951
All other	28	0	0
Corporate	3,076	1,809	6,266
Total additions to long-lived assets	<u>\$88,815</u>	<u>\$74,638</u>	<u>\$203,217</u>
Depreciation and amortization			
Petroleum additives	\$84,872	\$69,029	\$ 52,266
All other	52	11	13
Corporate	2,636	2,719	3,061
Total depreciation and amortization	<u>\$87,560</u>	<u>\$71,759</u>	<u>\$ 55,340</u>

Geographic Area Information - We have operations in the North America, Latin America, Asia Pacific, and EMEAI regions. Our foreign customers consist primarily of global, national, and independent oil companies.

The tables below report net sales, total assets, and long-lived assets by geographic area, as well as by country for those countries with significant net sales or long-lived assets. Since our foreign operations are significant to our overall business, we are also presenting net sales in the table below by the major regions in which we operate. NewMarket assigns net sales to geographic areas based on the location to which the product was shipped to a third party. Long-lived assets in the table below include property, plant, and equipment, net of depreciation, and lease right-of-use assets for 2019.

<i>(in thousands)</i>	Years Ended December 31,		
	2019	2018	2017
Net sales			
United States	\$ 728,125	\$ 722,576	\$ 696,138
China	225,498	239,406	224,409
Europe, Middle East, Africa, India	700,081	756,258	742,337
Asia Pacific, except China	311,469	335,119	293,137
Other foreign	225,122	236,316	242,383
Net sales	<u>\$2,190,295</u>	<u>\$2,289,675</u>	<u>\$2,198,404</u>

<i>(in thousands)</i>	December 31,	
	2019	2018
Total assets		
United States	\$ 728,571	\$ 586,339
Foreign	1,156,561	1,110,935
Total assets	<u>\$1,885,132</u>	<u>\$1,697,274</u>
Long-lived assets		
United States	\$ 275,646	\$ 226,191
Singapore	287,276	280,340
Other foreign	145,862	137,607
Total long-lived assets	<u>\$ 708,784</u>	<u>\$ 644,138</u>

Notes to Consolidated Financial Statements

5. Supplemental Cash Flow Information

<u>(in thousands)</u>	<u>Years Ended December 31,</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
Cash paid during the year for			
Interest and financing expenses (net of capitalization)	\$28,523	\$28,915	\$20,376
Income taxes	64,899	76,859	59,010
Supplemental disclosure of non-cash transactions:			
Non-cash additions to property, plant, and equipment	\$ 6,025	\$ 3,076	\$11,209
Non-cash obligation under capital lease	0	0	1,341

6. Trade and Other Accounts Receivable, Net

<u>(in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Trade receivables	\$289,737	\$276,667
Income tax receivables	16,021	12,210
Other	30,068	25,983
	<u>\$335,826</u>	<u>\$314,860</u>

7. Inventories

<u>(in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Finished goods and work-in-process	\$295,997	\$319,120
Raw materials	55,702	63,403
Stores, supplies, and other	14,239	13,818
	<u>\$365,938</u>	<u>\$396,341</u>

Our U.S. finished goods, work-in-process, and raw materials inventories, which are stated on the LIFO basis, amounted to \$116 million at December 31, 2019, which was below replacement cost by approximately \$50 million. At December 31, 2018, LIFO basis inventories were \$137 million, which was approximately \$56 million below replacement cost.

Our foreign inventories amounted to \$238 million at December 31, 2019 and \$248 million at December 31, 2018.

Reserves for obsolete and slow-moving inventory included in the table above were not material at December 31, 2019 or December 31, 2018.

8. Prepaid Expenses and Other Current Assets

<u>(in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Dividend funding	\$19,217	\$17,923
Income taxes on intercompany profit	5,756	6,431
Other	8,264	4,825
	<u>\$33,237</u>	<u>\$29,179</u>

Notes to Consolidated Financial Statements

9. Property, Plant, and Equipment, at Cost

<i>(in thousands)</i>	December 31,	
	2019	2018
Land	\$ 40,938	\$ 39,396
Land improvements	57,635	54,937
Leasehold improvements	2,122	1,968
Buildings	174,600	166,566
Machinery and equipment	1,161,409	1,143,106
Construction in progress	29,228	20,140
	1,465,932	1,426,113
Less accumulated depreciation and amortization	830,493	781,975
Net property, plant, and equipment	\$ 635,439	\$ 644,138

We depreciate the cost of property, plant, and equipment by the straight-line method over the following estimated useful lives:

Land improvements	9 - 25 years
Buildings	10 - 46 years
Machinery and equipment	3 - 30 years

Depreciation expense was \$64 million in 2019, \$63 million in 2018, and \$51 million in 2017.

10. Intangibles (Net of Amortization) and Goodwill

The net carrying amount of intangibles and goodwill was \$132 million at December 31, 2019 and \$136 million at December 31, 2018. The gross carrying amount and accumulated amortization of each type of intangible asset and goodwill are presented in the table below.

<i>(in thousands)</i>	December 31,			
	2019		2018	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortizing intangible assets				
Formulas and technology	\$ 9,600	\$ 5,416	\$ 9,600	\$ 3,250
Contract	2,000	600	2,000	400
Customer bases	14,240	10,931	14,240	9,091
Goodwill	122,987		122,940	
	\$148,827	\$16,947	\$148,780	\$12,741
Aggregate amortization expense		\$ 4,206		\$ 7,413

Aggregate amortization expense was \$3 million in 2017. All of the intangibles relate to the petroleum additives segment. The change in the gross carrying amount between 2018 and 2019 is due to foreign currency fluctuations.

There is no accumulated goodwill impairment.

Notes to Consolidated Financial Statements

Estimated annual amortization expense related to our intangible assets for the next five years is expected to be (in thousands):

2020	\$2,907
2021	2,156
2022	1,423
2023	907
2024	390

We amortize the contract over 10 years; customer bases over 4 years to 20 years; and formulas and technology over 3 years to 6 years.

11. Deferred Charges and Other Assets

<u>(in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Deposit on future leased plant and equipment	\$12,958	\$ 0
Finance lease right-of-use assets	12,840	0
Asbestos insurance receivables	5,528	3,727
Deferred financing costs, net of amortization	1,507	2,060
Other	4,902	4,091
	<u>\$37,735</u>	<u>\$9,878</u>

Deferred financing costs, net of amortization, in the table above include only those costs associated with the revolving credit facility. The amount of deferred financing costs, net of amortization related to the 4.10% senior notes is reported as a component of long-term debt. See Note 13 for further information on our long-term debt.

12. Accrued Expenses

<u>(in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Employee benefits, payroll, and related taxes	\$33,806	\$30,824
Customer rebates	22,682	24,822
Interest on long-term debt	5,290	5,388
Taxes other than income and payroll	3,631	5,778
Other	11,941	24,390
	<u>\$77,350</u>	<u>\$91,202</u>

13. Long-term Debt

<u>(in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Senior notes - 4.10% due 2022 (net of related deferred financing costs)	\$348,263	\$347,677
Senior notes - 3.78% due 2029	250,000	250,000
Revolving credit facility	44,678	168,129
Capital lease obligations	0	5,193
	<u>\$642,941</u>	<u>\$770,999</u>

Notes to Consolidated Financial Statements

4.10% Senior Notes – In 2012, we issued \$350 million aggregate principal amount of 4.10% senior notes due 2022 at an issue price of 99.83%. The notes are senior unsecured obligations and are registered under the Securities Act of 1933. We incurred financing costs totaling approximately \$5 million related to the 4.10% senior notes, which are being amortized over the term of the agreement.

The 4.10% senior notes rank:

- equal in right of payment with all of our existing and future senior unsecured indebtedness; and
- senior in right of payment to any of our future subordinated indebtedness.

The indenture governing the 4.10% senior notes contains covenants that, among other things, limit our ability and the ability of our subsidiaries to:

- create or permit to exist liens;
- enter into sale-leaseback transactions;
- incur additional guarantees; and
- sell all or substantially all of our assets or consolidate or merge with or into other companies.

We were in compliance with all covenants under the indenture governing the 4.10% senior notes as of December 31, 2019 and December 31, 2018.

3.78% Senior Notes – On January 4, 2017, we issued \$250 million in senior unsecured notes in a private placement with The Prudential Insurance Company of America and certain other purchasers. These notes bear interest at 3.78% and mature on January 4, 2029. Interest is payable semiannually. Principal payments of \$50 million are payable annually beginning on January 4, 2025. We have the right to make optional prepayments on the notes at any time, subject to certain limitations. The note purchase agreement contains representations, warranties, terms and conditions customary for transactions of this type. These include negative covenants, certain financial covenants and events of default which are substantially similar to the covenants and events of default in our revolving credit facility.

We were in compliance with all covenants under the 3.78% senior notes as of December 31, 2019 and December 31, 2018.

Revolving Credit Facility – On September 22, 2017, we entered into a Credit Agreement (Credit Agreement) with a term of five years. The Credit Agreement provides for an \$850 million, multicurrency revolving credit facility, with a \$150 million sublimit for multicurrency borrowings, a \$75 million sublimit for letters of credit, and a \$20 million sublimit for swingline loans. The Credit Agreement includes an expansion feature which allows us, subject to certain conditions, to request an increase to the aggregate amount of the revolving credit facility or obtain incremental term loans in an amount up to \$425 million. In addition, the Credit Agreement includes provisions that allow certain of our foreign subsidiaries to borrow under the agreement. The obligations under the Credit Agreement are unsecured and are fully and unconditionally guaranteed by NewMarket. The revolving credit facility matures on September 22, 2022. We incurred financing costs totaling \$2.8 million related to the Credit Agreement, which are being amortized over the term of the agreement.

The outstanding borrowings under the Credit Agreement amounted to \$45 million at December 31, 2019 and \$168 million at December 31, 2018. Outstanding letters of credit amounted to \$3 million at both December 31, 2019 and December 31, 2018 resulting in the unused portion of the credit facility amounting to \$803 million at December 31, 2019 and \$679 million at December 31, 2018.

Notes to Consolidated Financial Statements

Borrowings made under the revolving credit facility bear interest, at our option, at an annual rate equal to either (1) the Alternate Base Rate (ABR) plus the Applicable Rate (as defined in the Credit Agreement) (solely in the case of loans denominated in U.S. Dollars to NewMarket) or (2) the Adjusted LIBO Rate plus the Applicable Rate. The ABR is the greater of (i) the rate of interest publicly announced by the Administrative Agent as its prime rate, (ii) the NYFRB Rate (as defined in the Credit Agreement) from time to time plus 0.5%, and (iii) the Adjusted LIBO Rate for a one month interest period plus 1%. The Adjusted LIBO Rate means the rate at which Eurocurrency deposits in the London interbank market for certain periods (as selected by NewMarket) are quoted, as adjusted for statutory reserve requirements for Eurocurrency liabilities and other applicable mandatory costs. The Applicable Rate ranges from 0.0% to 0.625% (depending on our consolidated Leverage Ratio or Credit Ratings) for loans bearing interest based on the ABR. The Applicable Rate ranges from 1.00% to 1.625% (depending on our Leverage Ratio or Credit Ratings) for loans bearing interest based on the Adjusted LIBO Rate. At December 31, 2019, the Applicable Rate was 0.125% for loans bearing interest based on the ABR and 1.125% for loans bearing interest based on the Adjusted LIBO Rate.

The average interest rate for borrowings under our revolving credit facilities was 3.0% during 2019 and 3.0% during 2018.

We were in compliance with all covenants under the revolving credit facility at December 31, 2019 and at December 31, 2018.

Capital Lease Obligations – The 2018 capital lease obligations presented above are related to the Singapore manufacturing facility and were reclassified to finance lease liabilities in other noncurrent liabilities on the Consolidated Balance Sheets with the adoption of Accounting Standards Update 2016-02 on January 1, 2019. See Note 16 for further information.

14. Other Noncurrent Liabilities

<u>(in thousands)</u>	<u>December 31,</u>	
	<u>2019</u>	<u>2018</u>
Employee benefits	\$92,711	\$81,473
Deferred income taxes	57,196	43,071
Finance lease liabilities	11,119	0
Asbestos litigation reserve	10,534	8,296
Environmental remediation	9,204	9,854
Deemed repatriation of earnings	2,956	2,956
Other	19,686	19,417
	<u>\$203,406</u>	<u>\$165,067</u>

15. Stock-based Compensation

The 2014 Incentive Compensation and Stock Plan (the Plan) was approved on April 24, 2014. Any employee of our company or an affiliate or a person who is a member of our Board of Directors or the board of directors of an affiliate is eligible to participate in the Plan if the Compensation Committee of the Board of Directors (the Administrator), in its sole discretion, determines that such person has contributed or can be expected to contribute to the profits or growth of our company or its affiliates (each, a participant). Under the terms of the Plan, we may grant participants stock awards, incentive awards, stock units, or options (which may be either incentive stock options or nonqualified stock options), or stock appreciation rights (SARs), which may be granted with a related option. Stock options entitle the participant to purchase a specified number of shares of our common stock at a price that is fixed by the Administrator at the time the option is granted; provided, however,

Notes to Consolidated Financial Statements

that the price cannot be less than the shares' fair market value on the date of grant. The maximum period in which an option may be exercised is fixed by the Administrator at the time the option is granted but, in the case of an incentive stock option, cannot exceed 10 years. No participant may be granted or awarded, in any calendar year, shares, options, SARs, or stock units covering more than 200,000 shares of our common stock in the aggregate. For purposes of this limitation and the individual limitation on the grant of options, an option and corresponding SAR are treated as a single award.

The maximum aggregate number of shares of our common stock that may be issued under the Plan is 1,000,000. At December 31, 2019, 959,366 shares were available for grant. During 2019, we granted 1,120 shares to five of our non-employee directors, which vested immediately.

A summary of activity during 2019 related to NewMarket's restricted stock and restricted stock units (stock awards) is presented below in whole shares:

	Number of Shares	Weighted Average Grant-Date Fair Value
Unvested stock awards at January 1, 2019	19,328	\$414.52
Granted in 2019	6,326	440.42
Vested in 2019	2,001	381.99
Forfeited in 2019	2,542	399.78
Unvested stock awards at December 31, 2019 . . .	21,111	427.14

The weighted average grant-date fair value was \$415.98 for stock awards granted in 2018 and \$428.61 for stock awards granted in 2017. The fair value of shares vested was \$1 million in 2019, \$3 million in 2018, and \$3 million in 2017. We recognized compensation expense of \$2 million in 2019, \$2 million in 2018, and \$3 million in 2017 related to stock awards. At December 31, 2019, total unrecognized compensation expense related to stock awards was \$4 million, which is expected to be recognized over a period of 2.5 years.

16. Leases

Our leases are for land, real estate, railcars, vehicles, pipelines, plant equipment, and office equipment. We have both operating and finance leases with remaining terms ranging from less than one year to 51 years. Our lease agreements do not contain any material residual value guarantees or material restrictive covenants.

The components of lease expense were as follows:

<i>(in thousands)</i>	Year Ended December 31, 2019
Operating lease cost	\$17,414
Finance lease cost:	
Amortization of assets	2,723
Interest on lease liabilities	426
Short-term lease cost	3,459
Variable lease cost	3,206
Total lease cost	\$27,228

Notes to Consolidated Financial Statements

Variable lease costs also include leases that do not have a right-of-use asset or lease liability, but are capitalized as part of inventory. Rental expense was \$23 million in 2018 and \$33 million in 2017 under the authoritative accounting guidance in effect during those years.

Supplemental balance sheet information related to leases was as follows:

<i>(in thousands)</i>	Balance Sheet Classification	December 31, 2019
Operating leases:		
Operating lease right-of-use assets	Operating lease right-of-use assets	\$60,505
Current liability	Operating lease liabilities	\$14,036
Noncurrent liability	Operating lease liabilities-noncurrent	46,792
		<u>\$60,828</u>
Finance leases:		
Finance lease right-of-use assets	Deferred charges and other assets	\$12,840
Current liability	Other current liabilities	\$ 3,019
Noncurrent liability	Other noncurrent liabilities	11,119
		<u>\$14,138</u>
		December 31, 2019
Weighted average remaining lease term (in years):		
Operating leases		14
Finance leases		9
Weighted average incremental borrowing rate:		
Operating leases		3.88%
Finance leases		3.41%

Supplemental cash flow information related to leases was as follows:

<i>(in thousands)</i>	Twelve Months Ended December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$16,765
Operating cash flows from finance leases	426
Financing cash flows from finance leases	2,649
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	\$18,826
Finance leases	10,555

Notes to Consolidated Financial Statements

Maturities of lease liabilities as of December 31, 2019 were as follows:

<u>(in thousands)</u>	<u>Operating Leases</u>	<u>Finance Leases</u>
2020	\$16,019	\$ 3,443
2021	11,791	2,423
2022	9,105	1,390
2023	7,516	1,172
2024	4,244	1,127
Thereafter	<u>33,155</u>	<u>6,745</u>
Total lease payments	81,830	16,300
Less: imputed interest	<u>21,002</u>	<u>2,162</u>
Total lease obligations	<u>\$60,828</u>	<u>\$14,138</u>

Operating lease payments in the table above include approximately \$16 million related to options to extend lease terms that are reasonably certain of being exercised. At December 31, 2019, we had commitments of approximately \$36 million related to leases that have not yet commenced and are not included in the above table. Most of the commitments relate to plant and equipment that is being constructed or procured by the future lessors. These leases are expected to commence in 2020 and 2021.

Under the authoritative accounting guidance in effect at December 31, 2018, future lease payments for all noncancelable operating leases as of December 31, 2018 were (in thousands):

2019	\$17,223
2020	15,035
2021	10,502
2022	7,957
2023	6,810
After 2023	24,490

17. Pension Plans and Other Postretirement Benefits

NewMarket uses a December 31 measurement date for all of our plans.

U.S. Retirement Plans

NewMarket sponsors four pension plans for all full-time U.S. employees that offer a benefit based primarily on years of service and compensation. Employees do not contribute to these pension plans. The plans are as follows:

- Salaried employees pension plan;
- Afton pension plan for union employees (the Saugert plan);
- NewMarket retirement income plan for union employees in Houston, Texas (the Houston plan); and
- Afton Chemical Additives pension plan for union employees in Port Arthur, Texas (the Port Arthur plan).

In addition, we offer an unfunded, nonqualified supplemental pension plan. This plan restores the pension benefits from our regular pension plans that would have been payable to designated participants if it were not for limitations imposed by U.S. federal income tax regulations. We also provide postretirement health care benefits and life insurance to eligible retired employees.

Notes to Consolidated Financial Statements

The service cost component of net periodic benefit cost (income) is included in cost of goods sold; selling, general, and administrative expenses; or research, development, and testing expenses, to reflect where other compensation costs arising from services rendered by the pertinent employee are recorded on the Consolidated Statements of Income. The remaining components of net periodic benefit cost (income) are recorded in other income (expense), net on the Consolidated Statements of Income.

The components of net periodic pension and postretirement benefit cost (income), as well as other amounts recognized in other comprehensive income (loss), are shown below.

<i>(in thousands)</i>	Years Ended December 31,					
	Pension Benefits			Postretirement Benefits		
	2019	2018	2017	2019	2018	2017
Net periodic benefit cost (income)						
Service cost	\$ 13,471	\$ 15,391	\$ 13,679	\$ 718	\$ 896	\$ 774
Interest cost	14,509	13,256	13,289	1,514	1,458	1,582
Expected return on plan assets	(34,632)	(29,883)	(26,146)	(947)	(969)	(1,197)
Amortization of prior service cost (credit)	178	25	26	(3,028)	(3,028)	(3,029)
Amortization of actuarial net (gain) loss . . .	2,951	5,139	4,725	0	0	0
Net periodic benefit cost (income) . . .	<u>(3,523)</u>	<u>3,928</u>	<u>5,573</u>	<u>(1,743)</u>	<u>(1,643)</u>	<u>(1,870)</u>
Other changes in plan assets and benefit obligations recognized in other comprehensive income (loss)						
Actuarial net (gain) loss	(36,814)	29,215	(13,386)	3,049	(2,190)	2,635
Prior service cost (credit)	1,013	0	0	0	0	0
Amortization of actuarial net gain (loss) . . .	(2,951)	(5,139)	(4,725)	0	0	0
Amortization of prior service (cost) credit	(178)	(25)	(26)	3,028	3,028	3,029
Total recognized in other comprehensive income (loss)	<u>(38,930)</u>	<u>24,051</u>	<u>(18,137)</u>	<u>6,077</u>	<u>838</u>	<u>5,664</u>
Total recognized in net periodic benefit cost (income) and other comprehensive income (loss)	<u><u>\$ (42,453)</u></u>	<u><u>\$ 27,979</u></u>	<u><u>\$ (12,564)</u></u>	<u><u>\$ 4,334</u></u>	<u><u>\$ (805)</u></u>	<u><u>\$ 3,794</u></u>

The estimated actuarial net loss to be amortized from accumulated other comprehensive loss into net periodic benefit cost (income) during 2020 is expected to be \$5 million for pension plans. The estimated prior service credit to be amortized from accumulated other comprehensive loss into net periodic benefit cost (income) during 2020 is not expected to be material for pension plans. The estimated prior service credit to be amortized from accumulated other comprehensive loss into net periodic benefit cost (income) during 2020 related to postretirement benefits is expected to be \$3 million.

Notes to Consolidated Financial Statements

Changes in the plans' benefit obligations and assets follow.

<i>(in thousands)</i>	December 31,			
	Pension Benefits		Postretirement Benefits	
	2019	2018	2019	2018
Change in benefit obligation				
Benefit obligation at beginning of year	\$349,212	\$358,812	\$ 37,512	\$ 40,438
Service cost	13,471	15,391	718	896
Interest cost	14,509	13,256	1,514	1,458
Actuarial net (gain) loss	38,045	(26,957)	3,165	(2,355)
Plan amendment	1,014	0	0	0
Benefits paid	(13,195)	(11,290)	(2,589)	(2,925)
Benefit obligation at end of year	<u>403,056</u>	<u>349,212</u>	<u>40,320</u>	<u>37,512</u>
Change in plan assets				
Fair value of plan assets at beginning of year	384,552	365,421	22,378	22,904
Actual return on plan assets	109,493	(26,289)	1,063	803
Employer contributions	2,973	56,710	1,240	1,596
Benefits paid	(13,195)	(11,290)	(2,589)	(2,925)
Fair value of plan assets at end of year	<u>483,823</u>	<u>384,552</u>	<u>22,092</u>	<u>22,378</u>
Funded status	<u>\$ 80,767</u>	<u>\$ 35,340</u>	<u>\$(18,228)</u>	<u>\$(15,134)</u>
Amounts recognized in the Consolidated Balance Sheets				
Noncurrent assets	\$121,968	\$ 75,206	\$ 0	\$ 0
Current liabilities	(2,920)	(2,788)	(1,164)	(1,215)
Noncurrent liabilities	(38,281)	(37,078)	(17,064)	(13,919)
	<u>\$ 80,767</u>	<u>\$ 35,340</u>	<u>\$(18,228)</u>	<u>\$(15,134)</u>
Amounts recognized in accumulated other comprehensive loss				
Actuarial net (gain) loss	\$ 73,261	\$113,026	\$ 2,569	\$ (480)
Prior service cost (credit)	842	7	(22,647)	(25,675)
	<u>\$ 74,103</u>	<u>\$113,033</u>	<u>\$(20,078)</u>	<u>\$(26,155)</u>

The accumulated benefit obligation for all domestic defined benefit pension plans was \$346 million at December 31, 2019 and \$303 million at December 31, 2018.

The fair market value of plan assets exceeded the accumulated benefit obligation for all domestic plans, except the nonqualified plan, at December 31, 2019 and December 31, 2018. The fair market value of plan assets exceeded the projected benefit obligation for all domestic plans, except the nonqualified plan, at December 31, 2019 and December 31, 2018.

The net asset position for plans in which assets exceeded the projected benefit obligation is included in prepaid pension cost on the Consolidated Balance Sheets. The net liability position of plans in which the projected benefit obligation exceeded assets is included in other noncurrent liabilities on the Consolidated Balance Sheets.

A portion of the accrued benefit cost for the nonqualified plan is included in current liabilities at both December 31, 2019 and December 31, 2018. As the nonqualified plan is unfunded, the amount reflected in current liabilities represents the expected benefit payments related to the nonqualified plan during 2020.

Notes to Consolidated Financial Statements

The first table below shows information on domestic pension plans with the accumulated benefit obligation in excess of plan assets. The second table presents information on domestic pension plans with the projected benefit obligation in excess of plan assets.

<i>(in thousands)</i>	December 31,	
	2019	2018
Plans with the accumulated benefit obligation in excess of the fair market value of plan assets		
Projected benefit obligation	\$41,201	\$39,866
Accumulated benefit obligation	38,167	36,586
Fair market value of plan assets	0	0
<i>(in thousands)</i>	December 31,	
	2019	2018
Plans with the projected benefit obligation in excess of the fair market value of plan assets		
Projected benefit obligation	\$41,201	\$39,866
Fair market value of plan assets	0	0

There are no assets held by the trustee for the retired beneficiaries of the nonqualified plan. Payments to retired beneficiaries of the nonqualified plan are made with cash from operations.

Assumptions—We used the following assumptions to calculate the results of our retirement plans:

	Pension Benefits			Postretirement Benefits		
	2019	2018	2017	2019	2018	2017
Weighted-average assumptions used to determine net periodic benefit cost (income) for years ended December 31,						
Discount rate	4.25%	3.75%	4.25%	4.25%	3.75%	4.25%
Expected long-term rate of return on plan assets	8.50%	8.50%	8.50%	4.50%	4.50%	5.50%
Rate of projected compensation increase	3.50%	3.50%	3.50%			
Weighted-average assumptions used to determine benefit obligations at December 31,						
Discount rate	3.50%	4.25%	3.75%	3.50%	4.25%	3.75%
Rate of projected compensation increase	3.50%	3.50%	3.50%			

For pension plans, we base the assumed expected long-term rate of return for plan assets on an analysis of our actual investments, including our asset allocation, as well as an analysis of expected returns. This analysis reflects the expected long-term rates of return for each significant asset class and economic indicator. As of January 1, 2020, the expected rates were 8.5% for U.S. large cap stocks, 3.6% for fixed income, and 2.6% for inflation. The range of returns relies both on forecasts and on broad-market historical benchmarks for expected return, correlation, and volatility for each asset class. Our asset allocation is predominantly weighted toward equities. Through our ongoing monitoring of our investments and review of market data, we have determined that we should maintain the expected long-term rate of return for our U.S. plans at 8.5% at December 31, 2019. For the postretirement plan, we based the assumed expected long-term rate of return for plan assets on an evaluation of projected interest rates, as well as the guaranteed interest rate for our insurance contract.

Plan Assets—Pension plan assets are held and distributed by trusts and consist principally of equity securities and investment-grade fixed income securities. We invest directly in equity securities, as well as in funds which primarily hold equity and debt securities. Our target allocation is 90% to 97% in equities, 3% to 10% in debt securities and 1% to 5% in cash.

Notes to Consolidated Financial Statements

The pension obligation is long-term in nature and the investment philosophy followed by the Pension Investment Committee is likewise long-term in its approach. The majority of the pension funds are invested in equity securities as historically, equity securities have outperformed debt securities and cash investments, resulting in a higher investment return over the long-term. While in the short-term, equity securities may underperform other investment classes, we are less concerned with short-term results and more concerned with long-term improvement. The pension funds are managed by several different investment companies who predominantly invest in U.S. and international equities. Each investment company's performance is reviewed quarterly. A small portion of the funds is in investments such as cash or short-term bonds, which historically has been less vulnerable to short-term market swings. These funds are used to provide the cash needed to meet our monthly obligations.

There are no significant concentrations of risk within plan assets, nor do the equity securities include any NewMarket common stock for any year presented.

The assets of the postretirement benefit plan are invested completely in an insurance contract held by Metropolitan Life. No NewMarket common stock is included in these assets.

The following table provides information on the fair value of our pension and postretirement benefit plans assets, as well as the related level within the fair value hierarchy. Investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified by level in the fair value hierarchy.

<i>(in thousands)</i>	December 31, 2019				December 31, 2018			
	Fair Value	Fair Value Measurements Using			Fair Value	Fair Value Measurements Using		
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3
Pension Plans								
Equity securities:								
U. S. companies	\$338,564	\$338,564	\$ 0	\$0	\$280,717	\$280,717	\$ 0	\$0
International companies	20,751	20,751	0	0	4,223	4,223	0	0
Money market instruments . . .	17,618	17,618	0	0	13,099	13,099	0	0
Pooled investment funds:								
Fixed income securities—mutual funds	9,576	9,576	0	0	9,039	9,039	0	0
International equities—mutual fund	17,378	17,378	0	0	14,302	14,302	0	0
Common collective trusts measured at net asset value	78,256				61,254			
Insurance contract	1,680	0	1,680	0	1,918	0	1,918	0
	<u>\$483,823</u>	<u>\$403,887</u>	<u>\$ 1,680</u>	<u>\$0</u>	<u>\$384,552</u>	<u>\$321,380</u>	<u>\$ 1,918</u>	<u>\$0</u>
Postretirement Plans								
Insurance contract	<u>\$ 22,092</u>	<u>\$ 0</u>	<u>\$22,092</u>	<u>\$0</u>	<u>\$ 22,378</u>	<u>\$ 0</u>	<u>\$22,378</u>	<u>\$0</u>

Notes to Consolidated Financial Statements

The valuation methodologies used to develop the fair value measurements for the investments in the table above is outlined below. There have been no changes in the valuation techniques used to value the investments.

- Equity securities, including common stock and real estate investment trusts, are valued at the closing price reported on a national exchange.
- Money market instruments are valued at cost, which approximates fair value.
- Pooled investment funds—Mutual funds are valued at the closing price reported on a national exchange.
- The common collective trusts (the trusts) are valued at the net asset value of units held based on the quoted market value of the underlying investments held by the funds. One of the trusts invests primarily in a diversified portfolio of equity securities of companies located outside of the United States and Canada, as determined by a company’s jurisdiction of incorporation. We may make withdrawals from this trust on the first business day of each month with at least 10 days notice. Another trust invests primarily in a diversified portfolio of equity securities included in the S&P 500 index and a third trust invests primarily in a diversified portfolio of equity securities included in the Russell 1000 Value index. There are no restrictions on redemption for the index trusts and there were no unfunded commitments.
- Cash and cash equivalents are valued at cost.
- The insurance contracts are unallocated funds deposited with an insurance company and are stated at an amount equal to the sum of all amounts deposited less the sum of all amounts withdrawn, adjusted for investment return.

Cash Flows—For U.S. plans, NewMarket expects to contribute \$3 million to our pension plans and \$1 million to our postretirement benefit plan in 2020. The expected benefit payments for the next ten years are as follows.

<u>(in thousands)</u>	<u>Expected Pension Benefit Payments</u>	<u>Expected Postretirement Benefit Payments</u>
2020	\$13,011	\$2,553
2021	13,809	2,420
2022	14,687	2,296
2023	15,659	2,194
2024	16,689	2,094
2025 through 2029	98,827	9,906

Foreign Retirement Plans

For most employees of our foreign subsidiaries, NewMarket has defined benefit pension plans that offer benefits based primarily on years of service and compensation. These defined benefit plans provide benefits for employees of our foreign subsidiaries located in Belgium, the U.K., Germany, Canada, and Mexico. NewMarket generally contributes to investment trusts and insurance accounts to provide for these plans.

Notes to Consolidated Financial Statements

The components of net periodic pension cost (income), as well as other amounts recognized in other comprehensive income (loss), for these foreign defined benefit pension plans are shown below.

<i>(in thousands)</i>	<u>Years Ended December 31,</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
Net periodic benefit cost (income)			
Service cost	\$ 6,430	\$ 7,271	\$ 7,437
Interest cost	4,768	4,514	4,314
Expected return on plan assets	(9,084)	(9,918)	(8,479)
Amortization of prior service cost (credit)	(42)	(81)	(79)
Amortization of actuarial net (gain) loss	938	597	959
Net periodic benefit cost (income)	<u>3,010</u>	<u>2,383</u>	<u>4,152</u>
Other changes in plan assets and benefit obligations recognized in other comprehensive income (loss)			
Actuarial net (gain) loss	11,074	4,532	(3,029)
Prior service cost (credit)	0	537	0
Amortization of actuarial net gain (loss)	(938)	(597)	(959)
Amortization of prior service (cost) credit	42	81	79
Total recognized in other comprehensive income (loss)	<u>10,178</u>	<u>4,553</u>	<u>(3,909)</u>
Total recognized in net periodic benefit cost (income) and other comprehensive income (loss)	<u>\$13,188</u>	<u>\$ 6,936</u>	<u>\$ 243</u>

The estimated actuarial net loss to be amortized from accumulated other comprehensive loss into net periodic benefit cost (income) during 2020 is expected to be \$1 million. The estimated prior service credit to be amortized from accumulated other comprehensive loss into net periodic benefit cost (income) during 2020 is not expected to be material.

Notes to Consolidated Financial Statements

Changes in the benefit obligations and assets of the foreign defined benefit pension plans follow.

<i>(in thousands)</i>	December 31,	
	2019	2018
Change in benefit obligation		
Benefit obligation at beginning of year	\$173,620	\$185,815
Service cost	6,430	7,271
Interest cost	4,768	4,514
Employee contributions	680	737
Actuarial net (gain) loss	21,558	(10,976)
Benefits paid	(5,977)	(4,144)
Foreign currency translation	4,979	(9,597)
Benefit obligation at end of year	206,058	173,620
Change in plan assets		
Fair value of plan assets at beginning of year	163,746	176,968
Actual return on plan assets	19,591	(6,357)
Employer contributions	5,586	5,968
Employee contributions	680	737
Benefits paid	(5,977)	(4,144)
Foreign currency translation	5,829	(9,426)
Fair value of plan assets at end of year	189,455	163,746
Funded status	\$ (16,603)	\$ (9,874)
Amounts recognized in the Consolidated Balance Sheets		
Noncurrent assets	\$ 11,880	\$ 13,499
Current liabilities	(297)	(301)
Noncurrent liabilities	(28,186)	(23,072)
	\$ (16,603)	\$ (9,874)
Amounts recognized in accumulated other comprehensive loss		
Actuarial net (gain) loss	\$ 52,902	\$ 42,766
Prior service cost (credit)	778	736
	\$ 53,680	\$ 43,502

The accumulated benefit obligation for all foreign defined benefit pension plans was \$171 million at December 31, 2019 and \$146 million at December 31, 2018.

The fair market value of plan assets exceeded both the accumulated benefit obligation and projected benefit obligation for the U.K. and the Canada plans at both year-end 2019 and 2018. The net asset position of the U.K. and Canada plans are included in prepaid pension cost on the Consolidated Balance Sheets at December 31, 2019 and December 31, 2018. The accumulated benefit obligation and projected benefit obligation exceeded the fair market value of plan assets for the Germany and Belgium plans at December 31, 2019 and December 31, 2018. For the two Mexico plans, the accumulated benefit obligation and projected benefit obligation exceeded the fair market value of plan assets at December 31, 2019. At December 31, 2018 the fair market value of plan assets exceeded the accumulated benefit obligation but not the projected benefit obligation. The accrued benefit cost of these plans is included in other noncurrent liabilities on the Consolidated Balance Sheets.

Notes to Consolidated Financial Statements

As the Germany plan is unfunded, a portion of the accrued benefit cost is included in current liabilities at year-end 2019 and 2018, reflecting the expected benefit payments related to the plan for the following year.

The first table below shows information on foreign pension plans with the accumulated benefit obligation in excess of plan assets. The second table shows information on foreign pension plans with the projected benefit obligation in excess of plan assets.

<i>(in thousands)</i>	December 31,	
	2019	2018
Plans with the accumulated benefit obligation in excess of the fair market value of plan assets		
Projected benefit obligation	\$41,126	\$33,730
Accumulated benefit obligation	27,879	22,803
Fair market value of plan assets	12,642	10,618

<i>(in thousands)</i>	December 31,	
	2019	2018
Plans with the projected benefit obligation in excess of the fair market value of plan assets		
Projected benefit obligation	\$41,126	\$35,970
Fair market value of plan assets	12,642	12,597

Assumptions—The information in the table below provides the weighted-average assumptions used to calculate the results of our foreign defined benefit pension plans.

	2019	2018	2017
Weighted-average assumptions used to determine net periodic benefit cost (income) for the years ended December 31,			
Discount rate	2.67%	2.36%	2.53%
Expected long-term rate of return on plan assets	5.58%	5.50%	5.50%
Rate of projected compensation increase	4.10%	4.14%	4.20%
Weighted-average assumptions used to determine benefit obligations at December 31,			
Discount rate	1.81%	2.67%	2.36%
Rate of projected compensation increase	3.96%	4.10%	4.14%

The actuarial assumptions used by the various foreign locations are based upon the circumstances of each particular country and pension plan. The factors impacting the determination of the long-term rate of return for a particular foreign pension plan include the market conditions within a particular country, as well as the investment strategy and asset allocation of the specific plan.

Plan Assets—Pension plan assets vary by foreign location and plan. Assets are held and distributed by trusts and, depending upon the foreign location and plan, consist primarily of pooled equity funds, pooled debt securities funds, pooled diversified funds, equity securities, debt securities, cash, and insurance contracts. The combined weighted-average target allocation of our foreign pension plans is 38% in equities (including pooled funds), 37% in debt securities (including pooled funds), 6% in insurance contracts, and 19% in pooled diversified funds.

While the pension obligation is long-term in nature for each of our foreign plans, the investment strategies followed by each plan vary to some degree based upon the laws of a particular country, as well as the provisions of the specific pension trust. The U.K. and Canada plans are invested predominantly in equity securities funds,

Notes to Consolidated Financial Statements

diversified funds, and debt securities funds. The funds of these plans are managed by various trustees and investment companies whose performance is reviewed throughout the year. The Belgium plan is invested in an insurance contract. The Mexico plans are invested in various mutual funds, equities, and debt securities. The Germany plan has no assets.

There are no significant concentrations of risk within plan assets, nor do the equity securities include any NewMarket common stock for any year presented.

The following table provides information on the fair value of our foreign pension plans assets, as well as the related level within the fair value hierarchy. Investments that are measured at fair value using net asset value per share (or its equivalent) have not been classified by level in the fair value hierarchy.

<i>(in thousands)</i>	December 31, 2019				December 31, 2018			
	<u>Fair Value</u>	Fair Value Measurements Using			<u>Fair Value</u>	Fair Value Measurements Using		
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3
Insurance contract	\$ 10,706	\$ 0	\$10,706	\$0	\$ 10,618	\$ 0	\$10,618	\$0
Equity securities—international companies	691	691	0	0	684	684	0	0
Debt securities	663	646	17	0	756	698	58	0
Pooled investment funds— mutual funds	582	582	0	0	538	538	0	0
Cash and cash equivalents	131	131	0	0	66	66	0	0
Pooled investment funds (measured at net asset value):								
Equity securities—U.S. companies	13,074				10,294			
Equity securities— international companies	60,945				49,610			
Debt securities	67,094				60,480			
Diversified growth funds	35,569				30,700			
	<u>\$189,455</u>	<u>\$2,050</u>	<u>\$10,723</u>	<u>\$0</u>	<u>\$163,746</u>	<u>\$1,986</u>	<u>\$10,676</u>	<u>\$0</u>

The valuation methodologies used to develop the fair value measurements for the investments in the table above are outlined below. There have been no changes in the valuation techniques used to value the investments.

- The insurance contract represents funds deposited with an insurance company and is stated at an amount equal to the sum of all amounts deposited less the sum of all amounts withdrawn, adjusted for investment return.
- Equity securities are valued at the closing price reported on a national exchange.
- Debt securities are valued by quoted market prices or valued based on yields currently available on comparable securities of issuers with similar credit ratings.
- Pooled investment funds that are mutual funds are valued at the closing price reported on a national exchange.
- Cash and cash equivalents are valued at cost.

Notes to Consolidated Financial Statements

- The pooled investment funds are valued at the net asset value of units held by the plans based on the quoted market value of the underlying investments held by the fund. The U.K. pension plan is invested in units of life insurance policies that are linked to equity securities funds, government bond funds and diversified growth funds. The underlying assets of the equity funds, bond funds, and diversified growth funds are traded on a national exchange and are based on tracking various indices of the London Stock Exchange. There are no redemption restrictions on these funds. There were no unfunded commitments for the U.K. pension plan funds. The Canada pension plan is invested in a pooled Canadian equity fund and a pooled diversified fund. The Canadian equity fund invests in a diversification (sector and industry) of equities listed on a recognized Canadian exchange. The diversified fund invests in a diversified mix of equities, fixed income securities, cash, and cash equivalent securities. There are no redemption restrictions on the pooled Canadian funds and there were no unfunded commitments.

Cash Flows—For foreign pension plans, NewMarket expects to contribute \$6 million to the plans in 2020. The expected benefit payments for the next ten years for our foreign pension plans are shown in the table below.

<i>(in thousands)</i>	<u>Expected Pension Benefit Payments</u>
2020	\$ 5,662
2021	5,830
2022	4,390
2023	6,187
2024	8,186
2025 through 2029	33,050

18. Income Taxes

On December 22, 2017, the U.S. enacted tax legislation commonly known as the Tax Cuts and Jobs Act (Tax Reform Act), which required a one-time transition tax in 2017 on the deemed repatriation of previously deferred foreign earnings and reduced the U.S. corporate tax rate to 21% beginning in 2018. In addition, the Tax Reform Act included several provisions effective beginning in 2018 which impact NewMarket, including the global intangible low-taxed income (GILTI) inclusion from foreign subsidiaries and the foreign-derived intangible income deduction. We elected to account for the impact of the tax on GILTI in the period in which it is incurred.

We recognized \$31 million of income tax expense in the fourth quarter of 2017, as a result of the Tax Reform Act. This provisional expense included \$32 million relating to the one-time tax on deferred foreign earnings, which we elected to pay over an eight-year period, partially offset by \$1 million of reductions to deferred tax liabilities.

During the fourth quarter of 2018, we completed the accounting for the impact of the Tax Reform Act. We recorded \$1 million of additional tax on previously deferred foreign earnings, which was offset by \$8 million of reductions to deferred tax liabilities, as a result of the decrease in the U.S. corporate tax rate. These changes were the result of additional analysis, changes in previous interpretations and assumptions, additional regulatory guidance issued during 2018, and actions we took as a result of the Tax Reform Act. As of December 31, 2019, we have a remaining liability of \$3 million associated with the one-time tax on the deemed repatriation of foreign earnings, which is recorded in other noncurrent liabilities.

Notes to Consolidated Financial Statements

Our income before income tax expense, as well as our provision for income taxes is shown in the table below.

<i>(in thousands)</i>	<u>Years Ended December 31,</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
Income before income tax expense			
Domestic	\$183,907	\$157,459	\$140,779
Foreign	147,683	132,826	174,663
	<u>\$331,590</u>	<u>\$290,285</u>	<u>\$315,442</u>
Income tax expense			
Current income taxes			
Federal	\$ 29,955	\$ 9,153	\$ 61,188
State	9,551	4,679	3,942
Foreign	30,414	27,192	32,428
	<u>69,920</u>	<u>41,024</u>	<u>97,558</u>
Deferred income taxes			
Federal	1,671	16,545	15,901
State	630	2,888	3,633
Foreign	5,083	(4,906)	7,841
	<u>7,384</u>	<u>14,527</u>	<u>27,375</u>
Total income tax expense	<u>\$ 77,304</u>	<u>\$ 55,551</u>	<u>\$124,933</u>

The reconciliation of the U.S. federal statutory rate to the effective income tax rate follows.

	<u>% of Income Before Income Tax Expense</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
Federal statutory rate	21.0%	21.0%	35.0%
State taxes, net of federal tax	2.4	2.1	1.6
Foreign operations	1.7	(0.9)	(4.4)
Research tax credit	(1.7)	(1.5)	(1.1)
Foreign-derived intangible tax benefit	(2.1)	(2.4)	0.0
U.S. minimum tax on foreign income	1.0	1.5	0.0
Domestic manufacturing tax benefit	0.0	0.0	(0.8)
Deemed repatriation of foreign earnings	0.0	0.5	10.1
Change in U.S. tax rate	0.0	(2.0)	0.2
Other items and adjustments	1.0	0.8	(1.0)
Effective income tax rate	<u>23.3%</u>	<u>19.1%</u>	<u>39.6%</u>

Notes to Consolidated Financial Statements

Our deferred income tax assets and liabilities follow.

<i>(in thousands)</i>	December 31,	
	2019	2018
Deferred income tax assets		
Future employee benefits	\$ 0	\$ 4,550
Operating loss and credit carryforwards	13,375	16,578
Trademark expenses	3,892	3,833
Foreign currency translation adjustments	4,772	4,708
Other	7,015	5,925
Gross deferred income tax assets	29,054	35,594
Valuation allowance	(13,152)	(13,059)
Total deferred income tax assets	15,902	22,535
Deferred income tax liabilities		
Depreciation and amortization	56,618	51,601
Future employee benefits	4,064	0
Inventory	266	3,973
Other	5,823	4,938
Total deferred income tax liabilities	66,771	60,512
Net deferred income tax (liabilities) assets	\$(50,869)	\$(37,977)
Reconciliation to financial statements		
Deferred income tax assets	\$ 6,327	\$ 5,094
Deferred income tax liabilities	57,196	43,071
Net deferred income tax (liabilities) assets	\$(50,869)	\$(37,977)

Deferred income tax liabilities are included in other noncurrent liabilities in our Consolidated Balance Sheets. Our deferred taxes are in a net liability position at December 31, 2019. Our deferred tax assets include \$13 million of foreign operating loss carryforwards, foreign capital loss carryforwards, and foreign and state tax credits. The operating loss carryforwards expire in 2020 through 2036 and certain tax credits expire in 2026 through 2027. Based on current forecasted operating plans and historical profitability, we believe that we will recover the full benefit of our deferred tax assets with the exception of the aforementioned operating loss, capital loss, and tax credit carryforwards. Therefore, as of December 31, 2019, we have recorded a \$13 million valuation allowance substantially offsetting the full amount of these items.

As a result of the Tax Reform Act, we do not expect to distribute earnings from our foreign subsidiaries in a manner that would result in significant U.S. tax, as these earnings have been previously taxed in the U.S. or meet the requirements for a dividends received deduction. Therefore, we have only recorded an immaterial deferred tax liability for the currency impact and for the withholding taxes that will not be creditable upon distribution.

We have not provided a deferred tax liability on approximately \$123 million of temporary differences related to investments in foreign subsidiaries that are essentially permanent in duration, as these earnings are considered to be indefinitely reinvested. If we were to repatriate these earnings, we could be subject to income taxes and withholding taxes in various countries. Determination of the amount of unrecognized deferred income tax liability is not practicable due to the complexity associated with the hypothetical calculation.

Notes to Consolidated Financial Statements

A reconciliation of the beginning and ending balances of the unrecognized tax benefits from uncertain positions is as follows:

<i>(in thousands)</i>	December 31,		
	2019	2018	2017
Balance at beginning of year	\$10,660	\$ 9,102	\$8,810
Increases for tax positions of prior years	3,176	2,123	865
Increases for tax positions of the current year	703	614	453
Settlements	(440)	(252)	(260)
Lapses of statutes	(556)	(927)	(766)
Balance at end of year	\$13,543	\$10,660	\$9,102

At December 31, 2019, \$12 million of the amount of unrecognized tax benefits, if recognized, would affect our effective tax rate.

We expect the amount of unrecognized tax benefits to change in the next twelve months; however, we do not expect the change to have a material impact on our financial statements.

Our U.S. subsidiaries file a U.S. federal consolidated income tax return. We are currently under examination by various U.S. state and foreign jurisdictions and remain subject to examination until the statute of limitations expires for the respective tax jurisdiction. We are no longer subject to U.S. federal income examination for years before 2016. Foreign and U.S. state jurisdictions have statutes of limitations generally ranging from 3 years to 5 years. Years still open to examination by foreign tax authorities in major jurisdictions include: the U.K. (2018 and forward); Singapore (2015 and forward); Belgium (2017 and forward); and Mexico (2014 and forward).

19. Fair Value Measurements

The carrying amount of cash and cash equivalents in the Consolidated Balance Sheets, as well as the fair value, was \$144 million at December 31, 2019 and \$73 million at December 31, 2018. The fair value is categorized in Level 1 of the fair value hierarchy.

No material events occurred during 2019 requiring adjustment to the recognized balances of assets or liabilities which are recorded at fair value on a nonrecurring basis.

Long-term debt - We record the carrying amount of our long-term debt at historical cost, less deferred financing costs related to the 4.10% senior notes. The estimated fair value of our long-term debt is shown in the table below and is based primarily on estimated current rates available to us for debt of the same remaining duration and adjusted for nonperformance risk and credit risk. The estimated fair value of our publicly traded 4.10% senior notes included in long-term debt in the table below is based on the last quoted price closest to December 31, 2019. The fair value of our debt instruments is categorized as Level 2.

<i>(in thousands)</i>	December 31, 2019		December 31, 2018	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Long-term debt (excluding capital lease obligations in 2018)	\$642,941	\$677,253	\$765,806	\$757,414

Notes to Consolidated Financial Statements

20. Commitments and Contingencies

Contractual Commitments—We have contractual obligations for the construction of assets, as well as purchases of property and equipment, of approximately \$32 million at December 31, 2019, all of which are due within five years.

Purchase Obligations—We have purchase obligations for goods or services that are enforceable, legally binding, and specify all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum, or variable price provisions; and the approximate timing of the transaction. Purchase obligations exclude agreements that are cancelable without penalty. Purchase orders made in the ordinary course of business are excluded from this amount. Any amounts for which we are liable under purchase orders are reflected in our Consolidated Balance Sheets as accounts payable or accrued expenses.

Future payments for purchase obligations as of December 31, 2019 are (in thousands):

2020	\$171,444
2021	148,173
2022	135,415
2023	78,232
2024	2,485
After 2024	14,270

Litigation—We are involved in legal proceedings that are incidental to our business and may include administrative or judicial actions. Some of these legal proceedings involve governmental authorities and relate to environmental matters. For further information, see Environmental below and Item 1 of this Form 10-K.

While it is not possible to predict or determine with certainty the outcome of any legal proceeding, we believe the outcome of any of these proceedings, or all of them combined, will not result in a material adverse effect on our consolidated results of operations, financial condition, or cash flows.

Asbestos

We are a defendant in personal injury lawsuits involving exposure to asbestos. These cases involve exposure to asbestos in premises owned or operated, or formerly owned or operated, by subsidiaries of NewMarket. We have never manufactured, sold, or distributed products that contain asbestos. Nearly all of these cases are pending in Texas, Louisiana, or Illinois and involve multiple defendants. We maintain an accrual for these proceedings, as well as a receivable for expected insurance recoveries.

The accrual for our premises asbestos liability related to currently asserted claims is based on the following assumptions and factors:

- We are often one of many defendants. This factor influences both the number of claims settled against us and the indemnity cost associated with such resolutions.
- The estimated percent of claimants in each case that, after discovery, will actually make a claim against us, out of the total number of claimants in a case, is based on a level consistent with past experience and current trends.
- We utilize average comparable plaintiff cost history as the basis for estimating pending premises asbestos related claims. These claims are filed by both former contractors and former employees who worked at past and present company locations. We also include an estimated inflation factor in the calculation.

Notes to Consolidated Financial Statements

- No estimate is made for unasserted claims.
- The estimated recoveries from insurance and Albemarle Corporation (a former operation of our company) for these cases are based on, and are consistent with, the 2005 settlement agreements with Travelers Indemnity Company.

Based on the above assumptions, we have provided an undiscounted liability related to premises asbestos claims of \$12 million at December 31, 2019 and \$10 million at December 31, 2018. The liabilities related to asbestos claims are included in accrued expenses (current portion) and other noncurrent liabilities on the Consolidated Balance Sheets. Certain of these costs are recoverable through the settlement agreement with The Travelers Indemnity Company, as well as an agreement with Albemarle Corporation. The receivable for these recoveries related to premises asbestos liabilities was \$6 million at December 31, 2019 and \$5 million at December 31, 2018. These receivables are included in trade and other accounts receivable, net on the Consolidated Balance Sheets for the current portion. The noncurrent portion is included in deferred charges and other assets.

Environmental—We are involved in environmental proceedings and potential proceedings relating to soil and groundwater contamination, disposal of hazardous waste, and other environmental matters at several of our current or former facilities, or at third-party sites where we have been designated as a PRP. While we believe we are currently adequately accrued for known environmental issues, it is possible that unexpected future costs could have a significant impact on our financial position, results of operations, and cash flows. Our total accruals for environmental remediation, dismantling, and decontamination were approximately \$11 million at December 31, 2019 and \$12 million at December 31, 2018. Of the total accrual, the current portion is included in accrued expenses and the noncurrent portion is included in other noncurrent liabilities on the Consolidated Balance Sheets.

Our more significant environmental sites include a former plant site in Louisiana (the Louisiana site) and a Houston, Texas plant site (the Texas site). Together, the amounts accrued on a discounted basis related to these sites represented approximately \$8 million of the total accrual above at December 31, 2019, using discount rates ranging from 3% to 9%, and \$8 million of the total accrual above at December 31, 2018, using discount rates ranging from 3% to 9%. The aggregate undiscounted amount for these sites was \$10 million at December 31, 2019 and \$11 million at December 31, 2018. Of the total accrued for these two sites, the amount related to remediation of groundwater and soil was \$4 million for the Louisiana site and \$3 million for the Texas site at December 31, 2019 and \$4 million for the Louisiana site and \$4 million for the Texas site at December 31, 2018.

Notes to Consolidated Financial Statements

21. Other Comprehensive Income (Loss) and Accumulated Other Comprehensive Loss

The balances of, and changes in, the components of accumulated other comprehensive loss, net of tax, consist of the following:

<i>(in thousands)</i>	<u>Pension Plans and Other Postretirement Benefits</u>	<u>Foreign Currency Translation Adjustments</u>	<u>Accumulated Other Comprehensive (Loss) Income</u>
Balance at December 31, 2016	\$(76,187)	\$(106,323)	\$(182,510)
Other comprehensive income (loss) before reclassifications	10,966	23,849	34,815
Amounts reclassified from accumulated other comprehensive loss (a)	<u>1,701</u>	<u>0</u>	<u>1,701</u>
Other comprehensive income (loss)	<u>12,667</u>	<u>23,849</u>	<u>36,516</u>
Balance at December 31, 2017	(63,520)	(82,474)	(145,994)
Other comprehensive income (loss) before reclassifications	(25,027)	(12,287)	(37,314)
Amounts reclassified from accumulated other comprehensive loss (a)	<u>1,992</u>	<u>0</u>	<u>1,992</u>
Other comprehensive income (loss)	<u>(23,035)</u>	<u>(12,287)</u>	<u>(35,322)</u>
Balance at December 31, 2018	(86,555)	(94,761)	(181,316)
Other comprehensive income (loss) before reclassifications	15,983	1,808	17,791
Amounts reclassified from accumulated other comprehensive loss (a)	<u>777</u>	<u>0</u>	<u>777</u>
Other comprehensive income (loss)	<u>16,760</u>	<u>1,808</u>	<u>18,568</u>
Balance at December 31, 2019	<u><u>\$(69,795)</u></u>	<u><u>\$ (92,953)</u></u>	<u><u>\$(162,748)</u></u>

(a) *The pension plan and other postretirement benefit components of accumulated other comprehensive loss are included in the computation of net periodic benefit cost (income). See Note 17 for further information.*

Notes to Consolidated Financial Statements

22. Selected Quarterly Consolidated Financial Data (unaudited)

<i>(in thousands, except per-share amounts)</i>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
2019				
Net sales	\$536,616	\$563,417	\$555,817	\$534,445
Gross profit	152,869	170,833	162,727	143,440
Net income	62,205	74,174	67,805	50,102
Earnings per share - basic and diluted	5.57	6.63	6.06	4.48
	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
2018				
Net sales	\$589,245	\$598,952	\$563,166	\$538,312
Gross profit	156,783	145,859	140,883	141,838
Net income	60,565	52,885	58,481	62,803
Earnings per share - basic and diluted	5.14	4.53	5.12	5.58

23. Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

On January 1, 2019, we adopted Accounting Standards Update No. 2016-02, “Leases (Topic 842)” (ASU 2016-02) using the modified retrospective transition method allowing us to apply the new standard at the adoption date and to recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption.

Under this transition method, the prior comparative period continues to be reported under the accounting standards in effect for that period. We elected the package of practical expedients permitted under the transition guidance which, among other things, allowed us to carry forward the historical lease classification of existing leases. In addition, we elected the hindsight practical expedient to determine the lease term for existing leases and also elected the practical expedient related to land easements, allowing us to carry forward our accounting treatment for land easements on existing agreements. Adoption of the new standard resulted in recognition of both right-of-use assets and lease liabilities of approximately \$70 million as of January 1, 2019. As the right-of-use assets and lease liabilities were substantially the same at adoption, we did not record a cumulative effect adjustment to the opening balance of retained earnings.

On January 1, 2019, we adopted Accounting Standards Update No. 2018-02, “Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income” (ASU 2018-02). ASU 2018-02 allows, but does not require, reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects that resulted from the enactment of the Tax Reform Act at the end of 2017. We elected to not reclassify those tax effects from accumulated other comprehensive income to retained earnings upon the adoption of ASU 2018-02.

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

We maintain a system of internal control over financial reporting to provide reasonable, but not absolute, assurance of the reliability of the financial records and the protection of assets. Under Rule 13a-15(b) of the Securities Exchange Act of 1934 (the Exchange Act), we carried out an evaluation, with the participation of our management, including our principal executive officer and our principal financial officer, of the effectiveness of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) of the Exchange Act, as of the end of the period covered by this report. Based upon that evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures are effective at the reasonable assurance level.

There has been no change in our internal control over financial reporting, as such term is defined in Rule 13a-15(f) of the Exchange Act, during the quarter ended December 31, 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) of the Securities Exchange Act of 1934.

Our 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 accounting principles generally accepted in the United States of America. Internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America and that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on the consolidated 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.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in “Internal Control—Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in “Internal Control—Integrated Framework (2013),” our management concluded that our internal control over financial reporting was effective at the reasonable assurance level as of December 31, 2019. The

effectiveness of our internal control over financial reporting as of December 31, 2019, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included in Item 8 of this Annual Report on Form 10-K.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated by reference to our definitive Proxy Statement for our 2020 annual meeting of shareholders (Proxy Statement) under the headings entitled “Election of Directors,” “Committees of Our Board,” “Certain Relationships and Related Transactions,” and “Delinquent Section 16(a) Reports” and is included in Part I of this Form 10-K under the heading entitled “Information about our Executive Officers.”

We have adopted a Code of Conduct that applies to our directors, officers, and employees (including our principal executive officer, principal financial officer, and principal accounting officer) and have posted the Code of Conduct on our internet website. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K relating to amendments to or waivers from any provision of our Code of Conduct applicable to the principal executive officer, principal financial officer, and principal accounting officer by posting this information on our internet website. Our internet website address is www.newmarket.com.

We have filed, as exhibits to this Annual Report on Form 10-K, the certifications of our principal executive officer and principal financial officer required under Sections 906 and 302 of the Sarbanes Oxley Act of 2002 to be filed with the SEC regarding the quality of our public disclosure.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to our Proxy Statement under the headings (including the narrative disclosures following a referenced table) entitled “Compensation Discussion and Analysis,” “The Compensation Committee Report,” “Compensation of Executive Officers,” and “Compensation of Directors.”

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

Except as noted below, the information required by this item is incorporated by reference to our Proxy Statement under the heading “Stock Ownership.”

The following table presents information as of December 31, 2019 with respect to equity compensation plans under which shares of our common stock are authorized for issuance.

<u>Plan Category</u>	<u>Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights (a)</u>	<u>Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans</u>
Equity compensation plans approved by shareholders:			
2014 Incentive Compensation and Stock Plan	0	\$0	959,366
Equity compensation plans not approved by shareholders (b): . . .	<u>0</u>	<u>0</u>	<u>0</u>
Total	<u>0</u>	<u>\$0</u>	<u>959,366</u>

(a) *There are no outstanding options, rights, or warrants.*

(b) *We do not have any equity compensation plans that have not been approved by shareholders.*

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

The information required by this item is incorporated by reference to our Proxy Statement under the headings entitled “Board of Directors” and “Certain Relationships and Related Transactions.”

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference to our Proxy Statement under the heading “Ratification of Appointment of Independent Registered Public Accounting Firm.”

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(A)(1) Management's Report on Internal Control Over Financial Reporting

Report of Independent Registered Public Accounting Firm

Consolidated Statements of Income for each of the three years in the period ended December 31, 2019

Consolidated Statements of Comprehensive Income for each of the three years in the period ended December 31, 2019

Consolidated Balance Sheets as of December 31, 2019 and 2018

Consolidated Statements of Shareholders' Equity for each of the three years in the period ended December 31, 2019

Consolidated Statements of Cash Flows for each of the three years in the period ended December 31, 2019

Notes to Consolidated Financial Statements

(A)(2) Financial Statement Schedules—none required

(A)(3) Exhibits

- 3.1 Articles of Incorporation Amended and Restated effective April 27, 2012 (incorporated by reference to Exhibit 3.1 to Form 8-K (File No. 1-32190) filed April 30, 2012)
- 3.2 NewMarket Corporation Bylaws Amended and Restated effective August 6, 2015 (incorporated by reference to Exhibit 3.1 to Form 8-K (File No. 1-32190) filed August 6, 2015)
- 4.1 Description of Company's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934
- 4.2 Indenture, dated as of December 20, 2012, among NewMarket Corporation, the guarantors listed on the signature pages thereto and U.S. Bank National Association, as trustee, (incorporated by reference to Exhibit 4.1 to Form 8-K (File No. 1-32190) filed December 21, 2012)
- 4.3 Form of 4.10% Senior Notes due 2022 (included in Exhibit 4.2) (incorporated by reference to Exhibit 4.1 to Form 8-K (File No. 1-32190) filed December 21, 2012)
- 4.4 Registration Rights Agreement, dated as of December 20, 2012, among NewMarket Corporation, the guarantors listed on the signature pages thereto and J.P. Morgan Securities LLC and the other several initial purchasers of the Notes (incorporated by reference to Exhibit 4.3 to Form 8-K (File No. 1-32190) filed December 21, 2012)
- 10.1 Note Purchase Agreement dated January 4, 2017, by and among NewMarket Corporation, The Prudential Life Insurance Company of America, The Gibraltar Life Insurance Co., Ltd, The Lincoln National Life Insurance Company and The Prudential Life Insurance Company, Ltd., (incorporated by reference to Exhibit 10.1 to Form 8-K (File No. 1-32190) filed January 5, 2017)
- 10.2 First Amendment, dated as of October 10, 2017, to Note Purchase Agreement dated January 4, 2017, by and among NewMarket Corporation, The Prudential Insurance Company of America, The Gibraltar Life Insurance Co., Ltd, The Lincoln National Life Insurance Company and The Prudential Life Insurance Company, Ltd. (incorporated by reference to Exhibit 10.2 to Form 10-Q (file No. 1-32190) filed October 26, 2017)

- 10.3 2014 Incentive Compensation and Stock Plan (incorporated by reference to Exhibit 10.1 to Form 8-K (File No. 1-32190) filed April 24, 2014)*
- 10.4 Excess Benefit Plan (incorporated by reference to Exhibit 10.4 to Ethyl Corporation's Form 10-K (File No. 1-5112) filed February 25, 1993)*
- 10.5 Trust Agreement between Ethyl Corporation and Merrill Lynch Trust Company of America (incorporated by reference to Exhibit 4.5 to Ethyl Corporation's Registration Statement on Form S-8 (Registration No. 333-60889) filed August 7, 1998)
- 10.6 NewMarket Corporation and Affiliates Bonus Plan (incorporated by reference to Exhibit 10.9 to Ethyl Corporation's Form 10-K (File No. 1-5112) filed March 14, 2003)*
- 10.7 Indemnification Agreement, dated as of July 1, 2004 by and among NewMarket Corporation, Ethyl Corporation and Afton Chemical Corporation (incorporated by reference to Exhibit 10.5 to Form 10-Q (File No. 1-32190) filed August 5, 2004)
- 10.8 Services Agreement, dated as of July 1, 2004, by and between NewMarket Services Corporation and Afton Chemical Corporation (incorporated by reference to Exhibit 10.2 to Form 10-Q (File No. 1-32190) filed November 5, 2004)
- 10.9 Services Agreement, dated as of July 1, 2004, by and between NewMarket Services Corporation and Ethyl Corporation (incorporated by reference to Exhibit 10.3 to Form 10-Q (File No. 1-32190) filed November 5, 2004)
- 10.10 Services Agreement, dated as of July 1, 2004, by and between NewMarket Services Corporation and NewMarket Corporation (incorporated by reference to Exhibit 10.4 to Form 10-Q (File No. 1-32190) filed November 5, 2004)
- 10.11 Base Salaries of Named Executive Officers*
- 10.12 Summary of Directors' Compensation (incorporated by reference to Exhibit 10.1 to Form 10-Q (1-32190) filed October 26, 2017)*
- 10.13 Form of Restricted Stock Award Agreement (incorporated by reference to Exhibit 10.13 to Form 10-K (File No. 1-32190) filed February 19, 2019)*
- 10.14 Credit Agreement, dated as of September 22, 2017, by and among the Company and the Foreign Subsidiary Borrowers party thereto; the Lenders party thereto; JPMorgan Chase Bank, N.A. as Administrative Agent; Bank of America, N.A. and PNC Bank, National Association as Co-Syndication Agents and Citibank, N.A., DBS Bank, Ltd. and US Bank, National Association as Co-Documentation Agents (incorporated by reference to Exhibit 10.1 to Form 8-K (File No. 1-32190) filed September 26, 2017)
- 10.15 Form of Performance Stock Award Agreement (incorporated by reference to Exhibit 10.1 to Form 8-K (File No. 1-32190) filed February 26, 2018)*
- 21 Subsidiaries of the Registrant
- 23 Consent of Independent Registered Public Accounting Firm
- 31(a) Certification pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, by Thomas E. Gottwald
- 31(b) Certification pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, by Brian D. Paliotti
- 32(a) Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Thomas E. Gottwald

- 32(b) Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Brian D. Paliotti
- 101 XBRL Instance Document and Related Items
- 104 Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Indicates management contracts, compensatory plans or arrangements of the company required to be filed as an exhibit

(B) Exhibits—The response to this portion of Item 15 is submitted as a separate section of this Annual Report on Form 10-K.

ITEM 16. FORM 10-K SUMMARY

None.

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.

NEWMARKET CORPORATION

By: /s/ Thomas E. Gottwald
**(Thomas E. Gottwald, Chairman of the Board,
President, and Chief Executive Officer)**

Date: February 18, 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 and in the capacities indicated as of February 18, 2020.

<u>SIGNATURE</u>	<u>TITLE</u>
<u> /s/ THOMAS E. GOTTWALD </u> (Thomas E. Gottwald)	Chairman of the Board, President, Chief Executive Officer, and Director (Principal Executive Officer)
<u> /s/ BRIAN D. PALIOTTI </u> (Brian D. Paliotti)	Chief Financial Officer and Vice President (Principal Financial Officer)
<u> /s/ WILLIAM J. SKROBACZ </u> (William J. Skrobacz)	Controller (Principal Accounting Officer)
<u> /s/ PHYLLIS L. COTHRAN </u> (Phyllis L. Cothran)	Director
<u> /s/ MARK M. GAMBILL </u> (Mark M. Gambill)	Director
<u> /s/ BRUCE C. GOTTWALD </u> (Bruce C. Gottwald)	Director
<u> /s/ PATRICK D. HANLEY </u> (Patrick D. Hanley)	Director
<u> /s/ H. HITER HARRIS </u> (H. Hiter Harris III)	Director
<u> /s/ J. E. ROGERS </u> (James E. Rogers)	Director

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SHAREHOLDER INFORMATION

TICKER SYMBOL: NEU

TRANSFER AGENT:

Mailing Address:
Computershare
P.O. Box 505000
Louisville, Kentucky 40233

Overnight Correspondence:
Computershare
462 South 4th Street, Suite 1600
Louisville, Kentucky 40202

Website: www.computershare.com/investor

Other inquiries should be directed to
NewMarket's Shareholder Information Line

1-800-625-5191
or
1-312-360-5144

Hearing Impaired/TDD: 1-800-952-9245

